The Organic Values of Agri-Culture

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TO:

All the people I interviewed, and those I worked alongside during my fieldwork.

ESPECIALLY:

Howard and Rosemary Wass
Jeremy Taylor and everyone at Coldharbour Farm
All at Tamarisk Farm
Michael Newton

CONTENTS

PART THREE

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ABSTRACT

Organic farmers and growers in Britain are, technically, a clearly defined group. Producers who wish to sell their crops as organic are now legally required to comply with certain standards, and there were voluntary 'symbol schemes' for many years previously. There are detailed production standards for organic vegetables, fruit, arable crops, meat, eggs and dairy produce. These not only restrict the use of 'agrochemicals' and many conventional veterinary products, but include positive requirements about fertility-building rotations, animal welfare and environmental management.

Despite being united in working to defined standards, there is great diversity in the circumstances of organic producers. Organic enterprises range from mixed farms of a thousand or more acres to market gardens of less than an acre. Some organic producers have farms which have been in their family for generations, while others have moved out from the city in order to work with the land. There are farmers who have only converted part of their land to organic and still use agrochemicals on the rest, while other producers may have no experience of conventional methods.

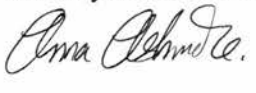
Producers also have widely differing motivations for farming or growing organically. There can be personal reasons for the choice: farmers may want to use more 'traditional' methods, or avoid being 'controlled' by agrochemical companies; growers have frequently chosen to 'get out of the rat-race'. Producers are also commonly concerned about one or more specific issues such as wildlife, health, or sustaining soil fertility. A few produce organically in the hope of thereby increasing their profits.

Although discrete reasons, such as the above, are often sufficient to lead people to farm or grow organically, some producers regard 'being really organic' as a 'way of life' involving an integrated set of values. Such people talk in terms of 'developing a relationship with nature' and may interpret this in a spiritual or religious context; they typically try to 'live well' in ways defined not by consumerist norms but by their sense of ecological and social ethics. 'Really organic' people generally aspire to 'sow seeds of change' in the wider world – usually by setting an example in the way they live, and sometimes also by the ways they market produce, but only rarely by political activism.

This study is based on extended interviews with thirty-seven organic producers across Britain, a postal survey of all Soil Association symbol-holders, and participant observation on ten organic holdings – both farms and market gardens.

Two core chapters address the twin approaches of 'farming and growing organically' and 'being really organic'. The findings are also presented in the form of eight 'composite studies'. Unlike classical 'case studies' these are not portrayals of actual places and people, although all the details and anecdotes are drawn out of the fieldwork. Re-constituting the research findings into composites has made them more representative than case studies could have been, and enables them to have explanatory force in their own right rather than merely illustrating the analytical discussion.

DECLARATION: I have composed this thesis myself on the basis of my own work.

30 September 1993 Anna Ashmole 

THREE EPIGRAMS

The conventional view

"Organic farming uses natural fertilizers and rotates stock farming (i.e. raising of animals) with crop farming; soil nutrients are maintained by the addition of plant and animal manures, and pest control is achieved by the use of naturally derived pesticides, and by crop rotation, which allows natural predation to take place. Organic farming may produce lower yields than traditional or intensive farming, but the lower yields may be offset by the high cost of the chemical fertilizers used in intensive farming; it may become more economic than conventional farming due to premium prices which are paid for organic products. In areas of overproduction, organic farming has the advantage of reducing crop production without loss of quality and without taking land out of agricultural use... The main factor in controlling conversion to organic farming is the capital cost." (Dictionary of Agriculture 1990: 169)

The organic view

"Organic (biological) agriculture and horticultural systems are designed to produce food of optimum quality and quantity... The principles and methods employed result in practices which:

- Coexist with, rather than dominate, natural systems;
- Sustain or build soil fertility;
- Minimize pollution and damage to the environment;
- Minimize the use of non-renewable resources;
- Ensure the ethical treatment of animals;
- Protect and enhance the farm environment with particular regard to conservation and wildlife;
- Consider the wider social and ecological impact of agricultural systems."

(Soil Association *Standards* 1992a: 3.101-102)

Beyond organic

"... three different motivations have come together to shape the farms of tomorrow.

• The first is the basic spiritual motivation: that every year life on earth is created anew, so that human beings can be born safely and have healthy bodies that will allow them to live out their individual and collective spiritual destinies.

• The second is a social motivation: to shape our land use with the goal that everyone have access to healthy food, wood, and fiber in the right amount and independent of his or her life situation.

• The third is the economic motivation... the economic ideal is a farm that achieves and maintains high fertility within itself, generating a surplus of food for the community, and its own seeds for the coming year while the input of outside substances, energies, and labour goes toward zero." (Groh & McFadden 1990: 19)

1

INTRODUCTION

1

INTRODUCTION

Organic agriculture can be viewed in strikingly different ways, as demonstrated by the three epigrams above. This introduction outlines the main concepts necessary to an understanding of the material presented in later chapters by examining the words of the title and summarising four additional themes. I then discuss the scope of the study and the different sources of literature, and preview the structure of the rest of the thesis.

Words: 'The Organic Values of Agri-Culture'

Organic

'Organic' agriculture – the generally accepted term in English-speaking countries – is also commonly known as 'biological' or 'ecological' and historically as 'fertility farming'; the term 'bio-dynamic' is used to refer to a system of agriculture which, like organic production, does not use modern agrochemicals, although it differs significantly from organic in its positive aspects[1]. Most languages other than English use variations on the word 'biological' for what we call 'organic', because the fundamental agricultural distinction is the reliance on biological systems rather than applications of chemicals to

[1] See glossary for technical terms and acronyms.

provide nutrients to plants. The diverse terms are united under an internationally recognised set of minimum standards for organic-biological agriculture laid down by IFOAM – the International Federation of Organic Agriculture Movements[1].

All of the above terms are subject to misinterpretation, but in the case of the word 'organic' it is particularly unfortunate that in chemistry, carbon-based compounds are known as organic (for the reason that they were originally thought to be produced only by living 'organisms'). Many pesticides are 'organic' in this chemical sense and yet are among those most scrupulously avoided by organic farmers and growers[2]. However, other connotations of the word organic are singularly apposite: one of the non-agricultural meanings is "characterised by the connection or co-ordination of parts in one whole" (Shorter Oxford English Dictionary) and the word is in this sense associated with the idea of an 'organism' – which can be held to "differ from a mere mechanism or aggregate by reason of the dependence of the nature and existence of its parts on their position in the whole" (Dictionary of Modern Thought 1977: 446). These definitions link very closely with the experience of some of the farmers who convert to organic methods: one of my interviewees said "the farm now has a more contained feel and each enterprise is linked so they all contribute to each other". This sense of 'organic' can be interpreted as having some of the same connotations as 'ecology': it is concerned with the workings of a living system.

Values

> A theory of value is a theory about what things in the world are good, desirable, and important. Such theories aim at answering a practical rather than a purely theoretical question since to conclude that a state of affairs is good is to have a reason for acting so as to bring it about, or if it exists already, to maintain it. (Dictionary of Philosophy 1979: 338)

The pervading theme of this thesis is values. It is about what organic farmers and growers think is good, desirable and important. And it is about the actions they take to bring about, or maintain, what they conclude to be good in agriculture and in life.

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1 There are, however, some terms which are intended to indicate methods which are not-quite-organic: for instance 'alternative', as used in the title of the (USA) National Research Council's report *Alternative Agriculture* (1989), and 'sustainable' as in Sustainable Farming Systems, the joint initiative between the University of Edinburgh and the Scottish Agricultural Colleges. See Cluniess-Ross (1992: 115) for list of similar terms.

2 Confusion over the dual use of the word penetrated even the EC regulation on organic production: Annex II permits the use of compost from 'organic' household refuse and 'organic' by-products of foodstuffs and textile industries. However, it is clear from the context that they do not mean household refuse derived from organically-produced vegetables etc, but simply 'organic', or 'carbon-based' refuse as opposed to that which is not bio-degradable.

Agri-Culture

> The word *agriculture*, after all, does not mean "agriscience," much less "agribusiness." It means "cultivation of land." And *cultivation* is at the root of the sense both of *culture* and of *cult*. The ideas of tillage and worship are thus joined in *culture*. And these words all come from an Indo-European root meaning both "to revolve" and "to dwell." To live, to survive on the earth, to care for the soil, and to worship, all are bound at the root to the idea of a cycle. (Berry 1977: 87, italics in original)

The word 'agriculture' is so familiar that it is easy to fail to recognise its two constituent parts. The hyphenation in the title of this thesis is intended both to draw attention to the fact that we have, in our language, incorporated the idea of 'culture' in our use of land to produce food, and also to indicate that I am concerned with the 'culture' of organic producers – their 'organic values' – rather than just their agricultural techniques. Conventional[1] agriculture has abandoned many traditional values and taken on new definitions of what is good; words like 'agribusiness' and 'agriscience' can therefore be both appropriate and revealing but the very different sense of the original word needs to be emphasised: Agri-Culture.

Themes

Alienation

The theme of alienation is woven through this whole account. Feelings of powerlessness, estrangement and depersonalisation are cited as reasons for farming or growing organically both by people who have moved into agriculture from other occupations and by those who convert land which they have previously farmed conventionally. Furthermore, the fifteenth century meaning of the term 'alienation', progressive insanity (Shorter Oxford English Dictionary), would be accepted by many organic producers as an accurate description of conventional agricultural methods!

Human relationship to nature

Organic producers (with the exception of a very few who are motivated only by the hope of increasing their profits) are united in thinking that conventional agriculture is in some

[1] I shall follow the practice of the organic movement in referring to modern agricultural methods which use agrochemicals as 'conventional'; see glossary.

ways irresponsible. Some single out only specific issues as cause for ethical concern, while others think that the whole matter of how we relate to nature is ethical: not just a matter of what we *can* do, but what we *should* do. Among the latter, there are some people who rely on their own personal codes of good conduct and others who feel that if one is truly in touch with nature the problem does not arise. Positive relationships to nature are commonly expressed in terms of a spiritual connection with the natural world and sometimes explicitly as part of a person's religious belief. The Christian doctrine of stewardship is often taken as a model for voluntarily limiting the control we exercise over nature; it says that the earth does not belong to us but that God has placed us in a position of authority and responsibility as stewards of it.

Integrity

Integrity carries both the meaning of "having no part or element wanting... completeness, entirety" and that of "soundness of moral principle... uprightness, honesty, sincerity" (Shorter Oxford English Dictionary). Both are relevant to my use of the term, which is intended to indicate the polar opposite of 'alienation'. Integrated or 'authentic' ways of thinking, working and living are sincere, complete and acknowledge interconnections with the rest of the world rather than discounting adverse effects as 'externalities'. Few organic producers would claim to have achieved this enlightened state, but for many it serves as an ideal to work towards.

Sustainability

The word 'sustainability' has been a prime target for definition by academics, and thus has acquired a number of precise but differing meanings – including the ecologically perverse one of 'sustained economic growth'. However, organic producers seem fairly consistent in using it to mean the possibility of indefinitely going on doing things as they are done at present. There are differences in quite how many future generations people take into account and in the geographical framework under consideration – which can range from the cultivation of a particular field to the totality of all animate and inanimate features of the planet. The issue of sustainability underlies many of the more specific practical goals of organic producers and for many people it has become a guiding principle.

Scope

Informants

This work is primarily about organic producers, both farmers and growers[1], who are licensed by the Soil Association to use their organic symbol. It was necessary to define the boundaries of the study clearly in this way, as there was a danger of taking on too wide a field. For instance, in 1991, when most of the fieldwork was undertaken, there were several organisations operating rather different sets of organic standards, and if I had become involved in a comparison of their members – let alone those people who grow organic food for their own consumption and are not registered at all – I could not have hoped to achieve the depth of analysis which has been possible by focussing on Soil Association producers. It was also tempting to try to compare the motivations and values of organic producers with those of consumers, but this again would either have made the project too large or necessitated over-simplifying the issues.

Soil Association producers were the obvious choice for several reasons: the Soil Association is by far the largest organisation in terms of both number of producers and acreage of land registered; it has always been the leading organisation with regard to public influence; its producing membership is united by compliance with one set of standards and yet is diverse in both external features such as type of holding and in internal motivations; and, not least, access was easy to arrange.

There were additional methodological reasons for choosing to study just one group. Access to OF&G (Organic Farmers & Growers), the second largest organisation, would have been extremely problematic: at the time even their standards were not publicly available, let alone a list of their members. Although it might have been possible to arrange to study only OF&G producers, the rivalry between them and the Soil Association was such that they would undoubtedly have found a comparative study unacceptable. The reasons for not including producers registered by the BDAA, the Bio-Dynamic Agricultural Association, were rather different. Bio-dynamic agriculture complies with organic standards but the terms are not synonymous; bio-dynamics additionally involves certain practical techniques and – philosophically – an anthroposophical approach. If, in survey or interview

[1] This distinction is widely made within the organic movement: farmers typically have large areas of land, keep stock and grow arable crops (although some have only grazing land) while growers typically produce vegetables and fruit from small market gardens – although the term also includes those farmers with field vegetables. The word 'producer' is used to encompass both farmers and growers.

questions, I had used the word 'organic', bio-dynamic producers would not have identified with it, and if I had substituted 'bio-dynamic' for 'organic' it would have entirely changed the emphasis of certain questions. In fact I did end up interviewing two bio-dynamic producers because they were registered with the Soil Association as well as the BDAA; there were indeed problems in adapting questions but the interviews turned out to be useful as they helped to illuminate the influence of bio-dynamics on the wider organic movement.

Geographical scope

The study covered producers in England, Scotland and Wales: survey forms were sent to all producers registered with the Soil Association. The geographical distribution of interviews and study visits within Britain is discussed in Chapter 3[1]. It is important to point out that the fieldwork was limited to Britain, and that the motivations of organic producers in a different social and political atmosphere cannot be assumed to be parallel, although some of my findings do echo an earlier Swiss study (Fischer 1982). My own 1990 study visit to Russia found similarities with Britain in the way that people associate agriculture based on agrochemical inputs with a loss of individual power and control, but also showed great differences in people's explicit reasons for avoiding chemical use: personal health was the prime reason in Russia, and environmental damage was only mentioned for its consequent effects on health (Ashmole 1990: 6).

Politics, ethnicity and gender

Party politics is not a significant force within the organic movement: moreover, the influence of leftish 'hippie' ideas seems to be counterbalanced by rural conservatism – within the movement as a whole and in the life-histories of individuals. I came across a few noteworthy exceptions to this – of both colours – but the main bias seems to be towards a rather generalised sympathy with the aims of the Green Party, although not necessarily with its operation as a political entity.

Attendance at any organic gathering – farm walk or conference – is enough to demonstrate that Britain's ethnic minorities are not well represented in the organic movement. There are probably not even enough non-white producers to enable a statistical comparison to be made with the wider farming population – which is itself mainly white. I did deliberately choose to interview one Indian woman, who proved to be deeply influenced by

[1] See also Appendix 1, Figure 2 for map.

Gandhian philosophy and had come to organic production via that, but her views cannot be taken as representative of any particular group.

Of 37 interviews, 25 were with men, 9 with women, and in 3 cases I interviewed a couple together; I did not identify any themes which were stressed more by women than men or *vice versa*. However, my interview schedule did not include questions designed to elicit information about the perceived roles and differences in attitude between men and women and, with hindsight, I think that I overlooked what might have been a fruitful line of enquiry. It was not until after I had completed the fieldwork that the concept of 'integration' crystallized as a major theme (see Chapter 6). Integration can be characterised as a female principle, in opposition to the 'male' forces of Western industrialisation, so it seems significant that it is esteemed by both men and women in the context of organic production. My discussion of organic producers' relationship to nature (see Chapter 6) would undoubtedly also have been enriched if I had borne in mind the significance of the female characterisation of nature while doing the fieldwork.

This failing in the fieldwork design is partly due to the fact that I had expected gender issues to come out in the general course of interviews, and partly due to the trouble I experienced in formulating overtly personal questions. For instance, in early interviews I tried to ask about how people's experience of having children affected their outlook on life, but this was perceived as too intrusive (or simply irrelevant) and I later settled for asking interviewees who had children about the prospects of them carrying on the farm or garden.

Literature

The literature I studied in the course of this research falls into three quite distinct categories: first, social science literature, which helped me to formulate an appropriate theoretical approach and methodology; second, agricultural and technical literature, which armed me with sufficient knowledge of the techniques of organic production to be able to communicate effectively with organic producers, and some of which also became part of the *object* of research (for instance, the various standards for organic agriculture); and third, inspirational and 'resonant' literature. Inspirational literature covers writing which is directed at, and often stems from, the organic movement but which is concerned with the philosophy, ideology or spiritual content of organic production rather than with purely practical issues. I characterise resonant literature as academic or philosophical

works which develop similar ideas to those expressed by organic producers without there being a causal connection between the two: the ideas are 'on the same wavelength', but there is no reason to assume that the thinkers have inspired the doers, or *vice versa.*

The bibliography includes, in addition to those works which are referenced, some that provided crucial inspiration or background information which could not be linked to specific portions of the text.

Social Science Literature

At an early stage in the research I referred to a range of works about survey design, interview methods (notably 'grounded theory' (Strauss 1987)) and participant observation. Although much of the fieldwork took the form of interviews rather than participant observation, my approach to the whole study was strongly influenced by anthropology and I read several works in this field; Alan Campbell's study of the Wayãpí (1989) was particularly important in providing an example of how to make creative connections between philosophy and the social sciences.

I also read more widely in the sociological literature to see whether it would be appropriate to locate my research in a particular sociological field such as rural sociology, social movements[1], or theories of social change. I was particularly disappointed that rural sociology seemed to have little to offer, although I maintained contact with the Rural Economy and Society Study Group and attended several of their conferences. Like the RESSG, the ESRC 'Countryside Change Initiative' seems mainly concerned with policy development and with gathering information to inform decisions at a political level: then and since, its working papers have adopted an entirely different approach from that which I intended to pursue.

At a late stage I did discover some research which is more closely aligned to my own: the work of Stewart Hill in Canada (1991 & 1992); a study on "goals and successes from the farmers' point of view" in New Zealand (Fairweather & Keating 1990); and *Der andere Landbau*, a research project on the motives and opinions of German-Swiss organic producers (Fischer 1982).

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1 See section on 'Diverse Identities' in chap 2.

Agricultural and technical literature

During the research period I kept in touch with developments in the organic movement by closely following the quarterly magazines of the Soil Association and British Organic Farmers, and by becoming a member of both organisations I also received less widely distributed newsletters. I also subscribed to *Food Matters* (a magazine published jointly by Farmers' World Network and Farmers' Link), to the WWOOF (Working Weekends On Organic Farms) newsletter, and obtained issues of various permaculture magazines and the bio-dynamic journal *Star and Furrow.* I attended both of the biannual BOF/OGA (British Organic Farmers/Organic Growers Association) conferences that fell within the research period and several BOF/OGA farm walks; summaries of the technical sessions at these events are normally issued and were useful for later reference.

It was crucial to have a thorough understanding of the various organic standards and I obtained three versions published by the Soil Association (circa 1974, 1989, and 1992 with 1993 amendments), the UKROFS (1992) standards, the 1989 IFOAM standards, and the EC regulation on organic food production (EEC 1991).

For general technical background I made use of many books about organic methods in particular Nicolas Lampkin's *Organic Farming* (1990); reports by Elm Farm Research Centre and by Greenpeace; and parts of the Organic Farming Centre *Final Report* (1991). Information about consumption and marketing of organic produce was derived from reports issued by the Consumers' Association (1990 & 1992), the Scottish Agricultural College (Daw *et al.* 1991), Leatherhead Food Research Association (Boyle *et al.* 1991) and others. I also attended two very relevant series of talks at the 1990 Edinburgh Science Festival on biotechnology and on sewage disposal.

Two collections of writings edited by Philip Cornford proved invaluable: *The Organic Tradition* (1988) covers the historical background, while *A Future for the Land* (1992) lives up to its subtitle in providing "a global perspective" on organic practice.

Inspirational and 'resonant' literature

The literature which I have designated as inspirational typically takes the form of articles appearing in journals such as those mentioned above, and introductions or asides in books of which the main focus is on the practicalities of organic production. Books on bio-dynamic agriculture and permaculture are particularly rich in such material, as are the older works on organic methods such as *Soil and Civilization* by Edward Hyams (1952).

'Resonant' literature is, by its nature, dispersed. Early discoveries were Nash's *Wilderness and the American Mind* (1967), Thomas's *Religion and the Decline of Magic* (1971), Horigan's *Nature and Culture in Western Discourses* (1988), Hart's *The Spirit of the Earth* (1984), Bockemühl's anthroposophical book *Dying Forests: a Crisis in Consciousness* (1986), and various works on 'deep ecology' – mainly by Arne Naess, but also Devall & Sessions, and others. At a later stage I followed up a thread of the North American environmental movement and read various articles by Wes Jackson, poetry by Gary Synder and two highly relevant books by the farmer Wendell Berry: *The Gift of Good Land* (1981) and *The Unsettling of America: Culture and Agriculture* (1986). I tend to class Berry's work as 'resonant', although it is closely grounded in the practicalities of farming, because his books are not widely known in Britain. Helena Norberg-Hodge's book *Ancient Futures* (1991) although ostensibly about Ladakh, makes strong prescriptions about Western lifestyles and is the closest in spirit to Berry's writings of anything published in Britain; indeed she references him extensively, along with many of the other authors mentioned above. Her book is a remarkable synthesis of anthropological insight and concern about the effects of industrial agriculture.

During the period of research many of the guest speakers at the lecture series run by Edinburgh University's Centre for Human Ecology have expounded ideas which I have found inspirational, 'resonant' and sometimes provocative; *The Ecologist* journal has also been a source of such material. Eastern philosophy and 'new physics' were two areas where I detected 'resonance' but felt that I lacked both the time and the competence to explore them in depth.

Outline

This thesis falls into three main parts: an introductory section of three chapters, of which this is the first; a set of eight 'composite studies'; and a section in which the motivations and values of organic producers are discussed in depth.

The introductory section sets out my parameters, aims and methodology, and gives the reader some background information about the history and organisational structures of the organic movement.

Chapter 4 consists of eight composite studies. These are vital to an understanding of the more abstract issues discussed in the later chapters. They contain a wealth of detail about

the practicalities of organic farming and growing – the realities which producers have to work with whatever their ideals – and provide a context for relating anecdotes which illuminate the way in which they develop and express their values.

The third section consists of two Chapters (5 & 6) which are closely based on the fieldwork, and a concluding chapter which considers five 'pandoras' – major and unpredictable issues each of which have the potential to influence the future of the organic movement in a fundamental way. Chapters 5 and 6 are superficially contradictory, but this reflects the the ways that different producers perceive their organic involvement. Chapter 5 is concerned with those who see it as straightforwardly a matter of 'farming or growing organically' and Chapter 6 with those who think that it is a matter of *being* organic, or even being 'really organic', rather than just adopting certain agricultural techniques.

2

THE ORGANIC MOVEMENT

2

THE ORGANIC MOVEMENT

History

The organic movement increased in both size and visibility during the 1980s and early 1990s: several supermarket chains began stocking organic produce, and the glossy pages of magazines such as *Country Living* were invaded not only by organic vegetables, but by bio-dynamic ones (Blythman 1991: 56). However, organic agriculture was not an invention of the 1980s, nor was it born of the 'self-sufficiency' boom of the 1970s. Even the agricultural landmark of the Second World War holds peculiarly little significance in the development of the organic movement because organic pioneers had been developing what Cornford calls a 'coherent opposition' to agricultural intensification, specialisation, and increased use of chemicals long before these became part of the policy of the war effort (1988: 8).

According to Lawrence Hills the word 'organic' was first used to refer to a form of agriculture by the American Jerome Irvine Rodale in 1942 (Hills 1980: 10). The British Soil Association was established in 1946 following the publication of Lady Eve Balfour's book *The Living Soil* – but this book was itself avowedly an attempt to "bring together, within the covers of a single volume, a summary of certain recent scientific research on nutrition and on soil fertility" (Balfour 1943: 10), and she referenced works from the 1920s,

30s and 40s. Cornford, in his introduction to an anthology of early writings on organic farming, goes so far as to claim that "all the essential ideas of the organic movement were in existence by 1952" (1988: 16)[1] – although this rather passes over the point, which Balfour aknowledged (1989: 3), that Rudolf Steiner's bio-dynamic ideas pre-date even the earliest organic pioneers.

1970 marked the end of an era: the Soil Association's declining membership, lack of funds, and disagreement about priorities led to the loss of the farm on which Lady Eve's 'Haughley Experiment' had been conducted. There was something of a takeover bid by the younger members, and a schism within the organisation led to the establishment of the rival Organic Farmers & Growers in 1975. At about this time the Soil Association also began to develop standards for organic production and to administer a symbol scheme.

The early 1980s saw the creation of two producer organisations BOF and OGA, closely allied to the Soil Association, and the start of a separate new research centre – Elm Farm. During the 1980s the Soil Association adopted a high-profile campaigning image and in 1985 moved its headquarters to the urban setting of Bristol. The Henry Doubleday Research Association (HDRA) opened Ryton Gardens, for the benefit of organic home-gardeners, and it has since provided a site for filming the Channel 4 TV series *All Muck & Magic?*. The total number of registered organic producers rose from 380 in 1985 to 800 in 1991/1992[2]; producer co-operatives sprung up around the country to supply the supermarkets; courses and research programmes were run from various universities and colleges; and the Soil Association began co-operating with government officials in the development of UKROFS standards. However, such recognition and success can be attributed as much to the spirit of the age as to the determination of individuals involved: Clunies-Ross claims that the explanation for organic ideas being taken seriously in the 1980s:

> ... lies not principally in the action taken by the organic movement, nor in a change in the kinds of arguments being used, nor, indeed, in the way they were presented; rather it has to be seen as a consequence of the gradual build up of problems within the [conventional] system which eventually created a space in which organic ideas could effectively be put forward. (Clunies-Ross 1990: 354)

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1 The accuracy of the term 'movement' in this context is a moot point: Clunies-Ross (1990: 128) argues that it is "particularly inappropriate" to the dispersed activity of the 1930s and 40s – leaving open the question of whether the label is now deserved.

2 Lampkin, quoted in Greenpeace 1992: 39.

Similarly a Scottish Agricultural College report attributed an upsurge of consumer interest in organic food to:

> ... a variety of factors [which] coincided in 1989 to create a shift in the demand curve which is unlikely to be repeated and may not be sustained. The shift in demand is attributable to food scares, the prominence of environmental issues in the media and to the espousal of environmental issues by all major UK political parties. (Daw, Slee & Wynen 1991)

By 1991, however, producers were also begining to doubt the assumption that consumer demand would continue to increase – and not all of them were happy about using the marketing routes which had enabled increased quantities of organic produce to be sold. In October 1991, prompted by the difficulties experienced by producers in marketing vegetables over the summer, the Soil Association's *Living Earth* magazine carried an article entitled "Organic Farming in Crisis?". Major legislation on organic food processing and production was at this time known to be pending, and since coming into force on the 1st of January 1993 it has also affected marketing patterns[1].

Since 1991 several supermarkets have dropped their organic lines, the drawbacks of increased bureaucracy are becoming felt, and organic organisations have experienced difficulty in raising funds for campaigning activities. On the other hand, there is, for the first time, to be government support for organic production – in the form of payments for land in conversion.

Producer Organisations

The Soil Association

The remit of the Soil Association includes education and research[2] as well as the certification of organic food producers – the latter now being under the auspices of the subsidiary Soil Association Organic Marketing Company Ltd (SAOMCo). Soil Association membership encompasses consumers as well as producers of organic food, and this is

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1 The impact of the EC regulation and consequent development of UKROFS is discussed in Chapter 7.

2 According to the Soil Association standards the organisation exists "to research, develop and promote sustainable relationships between the soil, plants, animals, people and biosphere, in order to produce healthy food and other products while protecting and enhancing the environment" (1992a: 1.106).

reflected in the content of its quarterly magazine, *The Living Earth*. There are numerous local groups which run lectures, fund-raising events and visits to organic holdings.

In March 1992 SAOMCo had 556 licensed producers[1], who were cultivating a total of 50,589 acres to organic standards – 6,000 acres of which were in the process of conversion. SAOMCo also had 123 food processors and manufacturers of organic agricultural inputs licensed under the Symbol Scheme (Soil Association 1992b: 4).

The Soil Association works in close co-operation with BOF/OGA, and the organisations share office-space in Bristol which they have recently begun to call 'The Organic Food and Farming Centre'.

British Organic Farmers/Organic Growers Association

Although initially two separate organisations this is now legally one body. BOF/OGA serves the interests of producers by issuing the journal *New Farmer and Grower* (which is more technical than the *Living Earth*) and a quarterly newsletter. It also organises the biennial organic conference at Cirencester, co-ordinates the presence of the Bristol organisations[2] at events such as the Royal Agricultural Show, runs numerous farm walks, promotes training opportunities and, along with the Soil Association, makes representations to industry and commerce. There are regional contacts across the country and several active local groups.

BOF/OGA does not licence organic producers; many of its producer members are licensed by SAOMCo, but some are with other organisations, or indeed are conventional producers interested in organic agricultural methods.

Organic Farmers and Growers Ltd.

OF&G is a co-operative which licences organic producers, encourages commercial organic food production and markets its members' organic produce; it also issues newsletters which are only available to the membership. In February 1993 it had 120 members actually growing organic produce, of which 10 were wholly organic. The total organic acreage

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1 Although in the autumn of 1991, when my survey was conducted, there were 574 licensed producers on the books.

2 As they often act corporately, I have adopted this term as shorthand for the Soil Association along with British Organic Farmers/Organic Growers Association in contexts where the particular identity is either not relevant or hard to determine.

licensed was in the region of 11,000 acres[1]. Historically OF&G has been involved mainly with the organic grain trade, and to some extent with vegetables; it now also markets some meat and milk. Since OF&G "has been run from the start as a commercial concern to ensure the financial viability of its members" (OF&G 1987: 11) it has tended to attract farmers who are less ideologically motivated than those who elect to join the Soil Association scheme. OF&G standards were previously less stringent than those of the Soil Association but since the advent of UKROFS they have become comparable.

Bio-Dynamic Agricultural Association

Bio-dynamic producers grow according to the principles of Rudolf Steiner. A certification scheme was started as early as 1928 and the 'Demeter' symbol is internationally recognised by the anthroposophical movement. The BDAA has about 50 licensed producers in Britain, cultivating nearly 5,000 acres[2]. For marketing reasons some bio-dynamic producers are also, or alternatively, registered with the Soil Association. The BDAA journal, *Star and Furrow,* is subscribed to by interested non-members as well as licensed producers.

Scottish Organic Producers Association Ltd.

SOPA was founded in 1988 to promote Scottish organic produce and encourage the development of appropriate marketing structures. In February 1993 it had licensed 43 organic producers on 9,830 acres of organic land[3].

Umbrella Standards

International Federation of Organic Agriculture Movements

IFOAM was founded in 1972, and by 1989 had close to 200 member groups; full membership is open only to relevant associations although individuals and private companies can join as associates. IFOAM publishes a brief set of *Basic Standards of Organic Agriculture,* holds major international conferences and issues a quarterly journal (in both English and

1 All statistics from personal communication from OF&G; 22/2/93.
2 Personal communication from Demeter fieldsman; 24/9/93.
3 Personal communication from SOPA; 25/2/93.

German). It does not run an inspection and certification scheme: its standards are intended to be a baseline for other groups to build on rather than a farm-level guide.

European Council Regulation (EEC) No 2092/91...

"... of 24 June 1991 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs"[1]. The emphasis of the regulation is more on inspection arrangements, labelling, and maintaining the integrity of organic produce during transport and processing than with the principles of organic agriculture *per se.* It gives a consumer-orientated legal definition to the word 'organic', but has no obvious intent to promote or encourage organic production[2].

Implementation of the regulation was delayed until 1 January 1993, as the proposed procedures for the acceptance of imports from outwith the EC were thought to be unworkable, and because Italy and Greece were not ready to enforce the regulation. The regulation is in any case incomplete in that it does not yet cover animal products. The most contentious aspect of the regulation among British producers has been the prohibition of conventionally grown plant material such as transplants, seed potatoes and fruit tree stocks. Among food processors, concern has centred around the complex restrictions on the use of non-organic ingredients in largely organic products and the rules about how such products can be labelled.

United Kingdom Register of Organic Food Standards

The impact of the EC regulation on British producers (and processors) is mediated by UKROFS, which was set up under 'Food From Britain', at the request of MAFF, to be the 'Control Authority' for the purposes of the EC regulation. UKROFS has approved five 'organic sector bodies': the Soil Association, OF&G, the BDAA, SOPA and the Organic Food Federation (a trade federation of manufacturers, processors and importers of organic products). These organisations now all work to UKROFS standards as a minimum and have the authority to license individual producers and processors; UKROFS additionally licenses a few people directly.

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1 Later amended by Council Regulation (EEC) No 2083/92 and Commission Regulation (EEC) No 207/93.

2 Conversely, the Soil Association standards, particularly prior to harmonisation with UKROFS, read as a definition of farming methods rather than of food quality. Even the 1989 standards did, however, make provision for withdrawing the symbol on crops affected by environmental pollution or spray drift (1989: 2.52-2.55), in acknowledgement that consumers expected organically produced food to be free of such contamination, even though this could never be guarantied.

The initial 1991 UKROFS standards diverged from those of the Soil Association by having a far greater emphasis on record-keeping and documentation, and making little mention of environmental protection measures[1]. However, current sets of standards have converged, as the Soil Association was obliged to incorporate the UKROFS standards into their own, and because in 1993 UKROFS adopted, virtually wholesale, the Soil Association's additional section on conservation. UKROFS standards are, in any case, considerably more detailed than the EC regulation and there remains considerable discussion as to how comparable UKROFS standards are with those of other member states: the suspicion among British producers and processors is that the regulation has been interpreted much more strictly here than elsewhere and that they are therefore at a trading disadvantage within the Community.

Consumers & Marketing

The market for organic food increased dramatically throughout the 1980s; for instance, in the space of two years (1987 to 1989) sales more than doubled – from £30 million to £62 million (Boyle *et al.* 1991: 5)[2]. However, in 1989 organic products still only accounted for 0.11% of the total retail food and drinks market, and even the most significant sector – fresh produce – took little over 1% of the national market (1991: 6).

Much of the increase in organic sales was accounted for by imported produce – which rose from 50% of organic fresh produce sales in 1988 to 70% in 1990, hitting a high of 95% in the spring of 1989 (Boyle *et al.* 1991: 8). 'The organic food market' is in fact predominantly fresh produce (76% of the total organic market, followed by bakery and cereals at 8%), which helps to explain seasonal variations in the proportion of imports – mainly from France, Holland and Israel (1991: 5).

Premiums are highly variable: in supermarkets organic produce can be twice the price of conventional, but some organic farmers and growers sell from farm shops or via delivery

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1 This divergence in approach was neatly illustrated when UKROFS inspected Soil Association procedures in 1992; representatives were perplexed by the Soil Association's established practice of re-cycling by keeping internal records on the back of used sheets of paper. From the UKROFS perspective this could only lead to confusion; to the Soil Association it was basic environmental responsibility.

2 According to the *Guardian*, research published by Mintel in September 1993 found that "Sales of foods produced without chemical fertilizers, pesticides, or growth-boosting hormones grew nearly fivefold between 1988 and 1993 to more than £100 million" and that "sales have risen strongly despite the recession and are forecast to boom in recovery" (*Guardian* 20 Sept 1993: 3).

rounds at conventional prices[1]. Pricing undoubtedly has an effect on who actually buys organic produce but it is worth noting that *interest* in organic food is not linked in an obvious way to socio-economic groupings (Daw *et al.* 1991: 13-14); (EFRC 1988: 31-2).

Organic farmers and growers are strongly motivated by environmental concerns[2]; in contrast, a study using consumer discussion groups concluded that:

> There was relatively little explicit linkage, in the young and old interested groups, between organic produce/farming and the wider environmental concerns which consumers would describe as *green*. These were strongly present for a minority who connected up the benefits of organic farming with benefit for the environment, but others clearly had not considered this wider context. (Organic Farming Centre 1991: Vol II, 13)

Which? surveys support this contention that consumers' reasons for purchasing organic food are predominantly self-centred: one survey showed 50% of consumers giving 'health' as a reason for buying organic, 33% the fact that the food was 'residue-free', and 20% that the taste was better; only 17% of respondents cited 'environment' and 4% 'animal welfare' (Consumers' Association 1990: 14)[3].

A 1989 'industry estimate' attributed 60% of organic retail sales to the multiple retailers, 20% to health food shops and independent grocers, and 20% to farm shops (Boyle *et al.* 1991: 15). Soil Association records show that 30% of their symbol-holders sell some produce to retail customers – often by running delivery rounds – and 14% have farm shops[4]. Fresh produce destined for the supermarket shelves is usually sold through one of a number of producers' co-ops – some of which also run pack-houses – or else through specialist organic wholesalers.

Although the situation has become clearer with the advent of the EC regulation and UKROFS – which give legal definition to the word 'organic' – there is still the potential for consumers to be confused about the status of produce. For instance, Tesco has an own-brand range, *Nature's Choice,* of which only some lines are organic; there are

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1 A *Which?* report found that organic prices for different products ranged from being the same as conventional to 128% higher, and that organic produce tended to be cheaper in greengrocers than in supermarkets (Consumers' Association 1992: 28-9).

2 See Appendix 1, Figure 11, and compare responses in the survey to statements 14 and 15, about the environment, with that to 3, about the healthiness of organic food.

3 A later study showed that 40% bought organic because it was thought to be chemical-free, 25% because of the taste, and 10% because "it doesn't damage the environment"; it is not clear from the report whether other options were available (Consumers' Association 1992: 30).

4 See Appendix 1, Figure 1 for details.

organisations such as the 'Guild of Conservation Grade Producers', which markets goods produced by methods which are not organic, but are "traditional and less intensive" (GCGP 1993)[1], and there are numerous and diverse quality schemes for meat (Soil Association 1991: 11-2). The status of produce can be unclear even with direct sales: organic vegetables and fruit tend to be the mainstay of farm shops and delivery rounds, with cheese and eggs as common sidelines. Frequently, however, the eggs will be free range, and the cheese 'farmhouse' or unpasteurised, rather than organic. Organic meat in farm shops is also often sold alongside meat with other environmental, health, or animal welfare claims, if only for the reason that there is little organic pork or poultry available.

Wider Influences

For more than a decade WWOOF (Working Weekends On Organic Farms) has been putting generally unskilled enthusiasts in touch with organic farmers and growers in need of a few extra hands for a weekend; sometimes the relationships last for years once the initial contact is made. The scheme plays an important role in forging links between organic producers and potential or actual consumers.

There are also various campaigning organisations which bridge the interests of organic consumers and producers; many of these belong to the SAFE Alliance (Sustainable Agriculture, Food and Environment). The Food Commission recently published a joint issue of its magazine with the Soil Association's *Living Earth.* The Farmers' World Network has a continuing interest in sustainable agricultural methods and there is some cross-fertilization with the organic movement. The International Society for Ecology and Culture is also beginning to have an influence by sponsoring a publication on community supported agriculture (Pullen 1992) and a forthcoming book subtitled *Rethinking Industrial Agriculture* (Goering, Norberg-Hodge & Page).

Organic agriculture has become a popular research topic during the past decade, and the long-established Elm Farm Research Centre and HDRA have been joined by college and university initiatives, most notably Aberystwyth's 'Centre for Organic Husbandry and Agroecology', and the three-year Edinburgh project 'Organic Farming Centre' which has

[1] There is not much love lost between the Guild and the Soil Association: the Guild's launch of a 'consumer member section' was designed to appeal to people who "are concerned about environmental issues but feel that any contribution they make is either having a minimal effect or is wasted in the pseudo-political lobbying of some organisations" (GCGP 1993).

continued under the banner 'Sustainable Farming Systems'. The Agricultural Training Board now runs one-day courses on organic techniques throughout the country, many agricultural colleges have organic options and a few run full courses[1]. Apart from providing very necessary research and training these activities also serve to increase the credibility of the organic movement.

Prince Charles' endorsement of organic methods has also been undeniably valuable to the organic movement: he has sent messages of support to BOF/OGA conferences, visited the Organic Food and Farming Centre marquee at the Royal Show, lent his presence to the launch of Sustainable Farming Systems, co-written a book about the organic management of his Highgrove estate (HRH The Prince of Wales 1993), and even launched his own brand of organic oatcakes[2].

Diverse Identities

An organic symbol can be obtained for enterprises ranging from the indoor cultivation of mushrooms or bean-sprouts to mixed farms of thousands of acres; organic hops, watercress, herbs and snails are produced as well as fruit, vegetables, cereals, meat and dairy produce; even non-food products like cut flowers and (imported) cotton can qualify; and some family smallholdings are registered as a gesture of solidarity even if they have little to sell. However, in the language and presentation of standards for organic production there an is ideal image of an organic holding: a mixed farm with a rotation of several years ley, various cereals, possibly some vegetables, and frequently legumes, green manure crops or forage; there should be at least two sorts of stock[3], and the system should rely on the minimum of inputs – most of the fertility being provided by clover-rich leys and manure from stock on the farm.

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1 Notably, an HND course in *Organic Agriculture* at Sheffield Hallam University, an Advanced National Certificate in *Organic Land Use* at Worcestershire College of Agriculture, a National Certificate of Horticulture in *Commercial Organic Production* at Otley College of Agriculture and Horticulture in Suffolk, and a course in *Bio-dynamic Agricultural Development* at Emerson College in Sussex.

2 The importance of Prince Charles' example to some producers is evidenced by the rather endearing comment on one of my survey returns: "We think that set-a-side is completely wrong, and that in general Prince Charles ideas are right".

3 Organic farmers are not permitted to use routine drenches for the control of internal parasites and rely instead on clean grazing systems to break parasite life-cycles. This is facilitated by keeping more than one type of animal; sheep and cattle, for instance, are host to different parasites and can thus follow each other on the same fields.

This ideal of a whole farm system pervades much of the early writing on organic farming, as well as bio-dynamic philosophy – which goes further by regarding the farm as an organism. The whole farm approach is enshrined in the IFOAM standards: one of the principal aims of organic agriculture is given as "To encourage and enhance biological cycles within the farming system, involving micro-organisms, soil flora and fauna, plants and animals." (IFOAM 1989: 4). However, the ideal of a whole farm system marginalizes a significant number of organic producers: particularly farmers with livestock run on permanent pasture or hill grazing[1], and market gardeners – who generally do not have stock, do not put down long-term leys, and rely on brought-in manures to maintain fertility[2].

Organic producers with small acreages are also marginalized to some extent by the emphasis on the environmental benefits of reducing agrochemical usage; this favours farmers because the impact of their decision is greater – affecting larger areas of potential wildlife habitat and involving a greater tonnage of chemicals. This bias was inherent in the Soil Association's *20% by the year 2000* campaign, which aimed, ambitiously, to convert a fifth of British farm-land by the end of the century[3].

While farmers have the advantage of controlling large acreages, vegetable growers (including those farmers growing field vegetables) are rendered significant by their contribution to the organic food market. As previously explained, it is fresh produce which typifies the organic food market. This is not only so in terms of monetary value but also in terms of visibility to the consumer: an Elm Farm report showed that out of fourteen of the supermarket multiples contacted, seven were selling organic fruit and vegetables, but only four sold milk and dairy products, three bread and cereal products, and none were then selling organic meat (Elm Farm 1988: 18-19). Farm shops and doorstep deliveries of produce – which put consumers in direct contact with organic producers – also sell mainly

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1 17% of respondents to my survey chose to describe themselves as livestock farmers; see Appendix 1, Figure 6.

2 The Soil Association standards assume a farm situation and make exceptions or specific comments for horticultural systems: in the 1992 standards the only sections specifically on horticulture are a page sandwiched between 'Grassland Management' and 'Mushroom Production' and a brief section on 'Arable and Horticultural Crop Rotations'. However, 28% of respondents to my survey identified themselves as growers – equivalent, in this instance, to market gardeners as there was a separate option of 'farmer and grower' and indeed one of 'smallholder'; see Appendix 1, Figure 6.

3 After the campaign was launched Lawrence Woodward, of Elm Farm, publicly clarified, at the 1991 Cirencester conference, that the aim was to achieve 20% of the agricultural land in Britain, rather than either of the rival interpretations: 20% of the food market or 20% of farmers (although he did add that they would be satisfied with 20% of whatever they could get!).

vegetables and fruit, and in the minds of customers the concept of organic is therefore linked to these products, and even to the ambience of the shops or the personality of the deliverer.

There are also sometimes problems of identity when a producer is using both organic and conventional techniques. This happens most often among farmers – either if they are too cautious to want to convert entirely or if they are in the process of conversion. Converting a farm can take many years, as it is usual to convert through leys and to stagger the process – both so that land can be adequately grazed and in order to help the cash flow by continuing with some conventional crops. Market gardens, however, are usually wholly organic: people are often starting out on new ground and so have less temptation to grow conventional crops to cover overheads, fertility can be built up with compost and brought-in manures, and grazing management is not an issue.

Organic producers are diverse not only in their type of agricultural enterprise but also in their education, politics, and material expectations: homes range from palatial mansions employing cooks and housekeepers to converted chicken sheds and caravans. Being registered as a Soil Association producer does not necessarily imply commonly held ideals: the practical benefits of being able to market produce as organic can lead people to join the scheme even if they have fundamental misgivings about the policies of the Bristol organisations. At one extreme, for those people who see organic production as adhering to a set of rules in order to get access to a premium market, the Bristol organisations appear idealistic and unaware of the practical limitations faced by producers. At the other end of the spectrum some symbol-holders regard the Soil Association and BOF/OGA as being locked into a simplistic promotion of organic techniques as a direct alternative to conventional methods, when they should be questioning basic agricultural assumptions (like ploughing for annually sown crops), challenging current social structures and land ownership patterns, and pulling out of any association with supermarkets.

The Bristol organisations are constrained from expressing extreme views by the very diversity of their membership, and by the Soil Association's aspiration to remain the foremost scheme for the registration of organic producers. Producers who find their views under-represented by Bristol often also join other organisations or loose networks which have a narrower remit and thus can express particular viewpoints more freely without the same risk of losing members. Organic producers are, of course, at liberty to leave the Soil Association scheme but there is a powerful incentive to belong either to it or one of the

equivalent schemes as producers are now legally obliged to be licensed if they are selling their produce as 'organic'.

3

WAYS AND MEANS

3

WAYS AND MEANS

Hamlet: Do you see yonder cloud that's almost in shape of a camel?
Polonius: By the mass, and 'tis like a camel, indeed.
Hamlet: Methinks it is like a weasel.
Polonius: It is backed like a weasel.
Hamlet: Or like a whale?
Polonius: Very like a whale.
(Shakespeare: *Hamlet* III, ii)

Polonius is desperate to humour Hamlet, and agrees with each successive perception of the cloud, but if truth be told he could scarcely disagree, save by flat contradiction, as Hamlet neglects to give any information about how he arrives at his judgements. The image of the whale is also adopted from Orwell by Bell and Encel as a metaphor for society – which sociologists should be aiming to spy out from the inside. In their collection of personal accounts of social research, *Inside the Whale,* Ron Wild provides the following exposition of the predicament:

> ... there is an intimate connection between the research workers, their methods of investigation, their results and their own intellectual development. The data gathered partly depend on the experiences, the abilities and the personality of the fieldworker. For this reason it is important to understand how such studies originated, what made their authors do them, how the projects were formulated and carried out, and what difficulties were encountered in collecting and analysing the data. (Wild 1978: 182)

Rather than leave readers, like Polonius, unable to make full use of their own judgement because of a lack of background information, I intend in this chapter to describe how my fieldwork was planned, which methods proved most useful for which sorts of data, how I related to the people I was studying, and the way in which the research evolved.

The aims of this project were always closely bound up with a phenomenological methodology: with the idea of interviewing a number of people about the values they considered important, and hearing their own explanations of why they act in particular ways, especially in the context of the natural world. Many theoretical discussions of environmental philosophy are not close enough to the ways in which non-philosophers think and act to have any great effect, or even to describe the position of the actors accurately. Rather than start with introspection I wanted to ask a cross-section of people about their values; and instead of simply looking at the occurrence of those issues that I thought important, I intended to ask open-ended questions in the hope of discovering new ones.

I had started with a fascination about how people who are not involved in agriculture think about the countryside, and I wanted to use the topic of land-use as a context in which to talk about values. Later, I began to baulk at the idea of interviewing people who had no direct relationship with, or control over, a particular piece of land. I feared that their lack of personal involvement in decisions about land-use would mean at worst that they would parrot clichés, and at best that their opinions would lack realism. Instead, I chose to study organic producers because they were a group of people who had their feet on the ground – literally – and who were likely to have some understanding of the practicalities of different sorts of land-use.

People using organic methods were of particular interest because they are stepping out of the mainstream: I thought that if there were, in Britain, new or re-emerging values about human relationship to nature, then this was one place where they were likely to be apparent.

Placing Myself in the Context

The interviews were the heart of the fieldwork, but the questions I asked were developed from the insights of participant observation, and they were later set in a wider context by means of a postal survey. For the fieldwork, even the survey, I needed to define myself to

the people I was approaching. One of the characteristics of my chosen 'down to earth' group of people is that they are not easily impressed by academia[1]. If I had limited myself to explaining that I was doing research about the motivations and values of organic producers, or even about 'why organic farmers farm organically', I would have left them with an impersonal impression rooted in a world which is not only distant from their own but is often explicitly rejected by them. It was important, in order to get their cooperation, to give myself a positive identity in terms which they were more likely to find acceptable.

There was also a specific reason for supplying the people I was interviewing with some personal details about myself: to make people feel more at ease about answering personal questions by giving the impression that there was an exchange of information. In fact, I would introduce myself in a standard wording prior to the interview, and afterwards confine myself to non-committal prompts. Rather than be impersonal and risk not being able to establish an effective rapport, I attempted to standardise the impression I made on people by stressing particular pre-chosen aspects of my experience.

I had to be careful that I was not viewed as an inspector checking up on how 'organic' people were, so a further objective was to create as broad an image as possible – to provide a sympathetic context for the expression of a wide range of different responses.

There were, therefore, three distinct reasons for me to establish an identity as more than a researcher. It was possible to this by referring to my upbringing on a more-or-less organic smallholding (which meant that I could be expected to be receptive to organic ideals) and to the fact that I was, for four years, the proprietor of a small, non-organic, food processing business – which gave me experience of the compromises that one is forced to make when doing things on a commercial scale. The letter I sent to people I wished to interview also mentioned a study-visit to Russia which included farm visits, and in my introduction to the interviews I hinted at an interest in philosophy.

I could select which aspects of my personal history to highlight, but their impression of me was also formed by my gender, my clothes and appearance, and the vehicle I used. I was particularly aware of the latter because I was dependent on borrowing a series of different cars from friends and relatives, and they each elicited rather different sorts of

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[1] However, I would hesitate to go as far as Clunies-Ross, who claims that there is widespread "distrust and dislike of 'outsiders' within the organic movement, especially journalists, students and researchers" (1990: 8).

comment. I abandoned the idea of using a VW van after the first expedition (despite the practical advantage of being able to sleep in it *en route*) because of its association with hippies. Farmers, in particular, are often sensitive about that image because they have a justifiable fear of being branded with it as a result of their organic interests. I became self-conscious about one car which bore a Greenpeace sticker, and was happiest in a genuine farm vehicle: a Vauxhall Astra estate littered with straw and baler twine and bearing a business-like towbar on the back.

Being a woman appeared to have some advantages; two thirds of the people I interviewed were men and it was perhaps easier for me to persuade them to agree to be interviewed in the first place, and to establish a rapport, than it would have been for a man in my position. When I contacted other women I may have seemed less threatening than a man making the same request. I was aware, with both men and women, that when drawing them out on the more personal questions at the end of the interview, I was relying on their perception of me as an interested individual rather than as an researcher. Such an intimate interest could be seen as more acceptable coming from a woman than a man. It is impossible to substantiate this, but I feel that my research – particularly with men – was facilitated by exploiting a dual status as a woman and as a researcher. I could exert my status as a researcher when necessary, and yet when I wanted to invite confidences I had the advantage of being a woman.

With regard to clothes, on working visits to farms practicality was always my primary consideration. However, I deliberately dressed quite smartly for the earlier interviews – until I discovered that it simply made me feel and look out of place to be dressed in city clothes. It was more important to be accepted by the people I was visiting than to appear professional. I settled on jeans and sweatshirt as being suitably unspecific and learnt always to keep a pair of wellingtons in the back of the car.

It was also important for me not to express strong opinions on any of the debates within the organic movement, and I managed to maintain this reasonably well throughout the fieldwork. It was helpful that I knew very little about the details of organic standards before I started this project and so did not have to renounce or hide any opinions about controversial aspect of the standards. Biotechnology was the one topic on which I was unable to remain entirely impartial, especially when I was working on a farm and thus talking with people over a period of time. None of the organic organisations has yet developed an official policy on the use of genetically engineered organisms by organic producers, and at times I was unable to contain my personal fear that it may become a

second Green Revolution, and that the mistakes of the first one will be repeated with a different technology.

Although I tried to minimize the influence of my own opinions on the farmers interviewed, I neglected to guard against being personally affected by the fieldwork. Only in looking back do I realise the extent to which I have been convinced of the diverse merits of organic production through doing this research. I did not set out to convert anyone to growing or buying organic food, and if by writing this I do so, I am the first victim: I can now hardly bring myself to buy conventionally grown vegetables. Whereas previously I rejected organic vegetables because of the cost to my purse, I have now become overwhelmingly aware of the uncounted costs of conventional production.

Participant Observation

Working visits

I decided to work on a few organic farms and market gardens as a way of learning the language of the people I planned to study. This was not so much a matter of words or even the details of specific techniques, both of which I could, and did, learn about by reading. It was more about gaining practical skills and experience so that, for example, I would have some idea of what was involved when someone mentioned planting out fifty thousand young leek plants, and the difference it would make if they were in modules. I learnt the smell and slime and depression of sorting through a crop of blighted potatoes; why hoeing carrots is more difficult than swedes or onions (the young carrots are not only more delicate, but are tough to spot among the weeds when your eyes start to swim after a couple of hours); the agonies of having contagious abortion in a flock of ewes and not knowing whether the lambs are going to come out dead or alive; the frustration of a stockman who wants 'what's right for the beasts' when the organic standards will only allow him to give them homoeopathic 'holy water'; and how to dip sheep with a baby (not mine) on my back.

Working alongside organic producers fulfilled several roles in the research. It had an explorative function in generating ideas for questions on the interview schedule. It lent me credibility at a later stage, when I was interviewing people and was able to refer to the work I had done on these farms and gardens. It has been explanatory, by illuminating many of the findings of the interviews and survey. It allowed me to observe the various

people working and living on a place, and how their roles and attitudes differed – an aspect that was particularly difficult to capture by interviews alone. Finally, and most concretely, it provided most of the material for the composite studies of Chapter 4.

I gave over most of 1991 to fieldwork: working visits to farms and market gardens, interviewing, and organising the postal survey. I had already done two short farm visits in 1990, and three preliminary interviews, to see how the techniques would work. Most of the working visits to farms were in the spring and summer of 1991, so that insights from them could be incorporated into the interview schedule which I formulated in the autumn. I later did a further three working visits, to gain a deeper understanding of certain specific circumstances: a market garden that was not influenced by bio-dynamics, a permacultural holding, and a farm run by a community rather than an individual or a family. When choosing places for working visits I looked for a range of different situations. Organic farms and gardens are run by people with diverse backgrounds, producing a variety of produce and selling it by different routes; some places use paid staff while others have volunteers. Appendix 3 sets out the incidence of such factors for the farms and gardens I visited.

I did ten study-visits, mostly lasting between ten days and a fortnight. In some cases I used the *Working Weekends on Organic Farms* network to get in touch with people; otherwise I relied on personal contacts. I was always explicitly a volunteer (and a researcher), although on the two farms where I worked as a lambing assistant I was afterwards given some money, as I had been doing a job for which they might otherwise have employed someone. The volunteer status was effective in categorising me in a way that people were familiar with; nearly all organic growers and many farmers have some experience of voluntary workers. It also meant that the accepted exchange for my work was bed and board and a variable degree of involvement with family life. This suited my purposes as it gave me the opportunity to talk to many people informally, to see how families ate, how they occupied their spare time, and what their contacts with the local community were like. By living with people I could observe directly, and often participate in, many of the aspects of life that I was questioning people about in interviews.

I aimed to conform to my surroundings: working hard (usually harder than they expected of volunteers), and although I did not try to disguise my role as researcher I avoided drawing attention to it, and never took notes in public. On one farm, where several members of the extended family had science-based post-graduate qualifications, this approach backfired as they grew worried at seeing no visible signs of my research and thought perhaps this

was because they were filling up too much of my time with farm work, but generally it enabled me to participate in the daily life of a place while minimizing disruption to it. I often initiated topics of conversation, but avoided confrontation and tried to be non-directive in my responses. I also participated in whatever leisure activities were planned: I went to the Methodist service when staying with a lay preacher, to the Easter service of a small village church, sat in Buddhist meditation, circle-danced round a candle, was taken to the pub gathering of young farmers organised by the local vet keen to promote a new vaccine, and got my first lessons in bell ringing, skiing, and paragliding when these turned out to be the enthusiasms of my various hosts.

On two occasions I did find it difficult to maintain this adaptability. Once, I had arranged a visit well in advance and by the time I arrived my hosts had meanwhile been accommodating a whole string of interested visitors. They were tired out, and also had a clearer perception that they were being 'studied' than many of the people I stayed with; they told me that they were uncomfortable with this and felt like guinea pigs. As they were self-defined anarchists they were not very inhibited about expressing their wish to have me gone, but on my last day there – by which time I had done a considerable amount of rather tedious work for them – I was rather sheepishly shown around the metal-workshops. I understood this to be something of an honour and perhaps also an apology.

The other difficult visit was to a farm where I had to maintain two entirely separate roles. I was working alongside a shepherd and a stockman who were unconvinced of the merits of organic methods, which meant that I had to under-play my own sympathies. I did this rather successfully – at one point they even teasingly warned me that if I ate the lettuce which I had just been given it might cause me to start voting Green, as if this was otherwise inconceivable. At the same time, however, I was having meals and long discussions with the (pro-organic) owner of the farm, which entailed trying to fit in with the expectations of the local landed gentry. This taxed me in quite another way: trying to find an appropriate manner to relate to household servants, and restraining comment at casually expressed racism and homophobia.

Although I could aim at being non-directive in my attitude, I could not avoid the fact that my very presence and questioning influenced people. The people I worked alongside on farms and market gardens knew that I was interested in their reasons for being organic, and my questions were often a catalyst for them to re-assess their own positions. At the end of one of my visits the farmer, who had only partly converted to organic, explicitly asked for my advice about the future management of his land. Given that I had spent the previous

week trying to understand him and his farm it was eminently sensible of him to take the opportunity to glean something from my outsider's perspective. On another occasion a question from my interview schedule formed the basis of a sermon which the farmer, who was also a lay preacher, gave the following Sunday. By asking people about their lives and their attitudes to the organic movement I left a sort of 'wake' behind me. I had some indications that this happened even when I simply interviewed someone for a morning and then left, but it was of course more visible if I was working alongside an interviewee on subsequent days. On the working-visits I generally interviewed people towards the end of my stay so that I could avoid the effects of this 'wake' – and also because I discovered that people were more candid and thoughtful in their responses once I proved myself through working for them[1]. Although it was interesting after an interview to listen to people thinking about the issues I had raised, it became impossible for me to remain detached, as they would ask me directly about my own opinions and about the responses that other producers had given to my questions.

The Bristol organisations

Although my focus was on farmers and growers, I also needed some first-hand experience of the Bristol organisations, as it is they who are explicitly defining and promoting the concept of organic production which acts as a bench-mark for the producers I was interviewing. Many producers think that the Soil Association Standards are unrealistically rigid and intricate, while others feel that, while it may be necessary to define the practical details, the Standards miss entirely the spirit of what it means to farm or grow organically. I wanted to gain some insight into how the Bristol organisations saw their own role and how decisions about the Standards were made. Again, being a volunteer was a convenient way in: the Soil Association regularly appeals for assistance in the office, and I spent a week there as part of my initial fieldwork. I was asked to look through all the files of symbol-holders and extract certain information from each one. This gave me a feeling for the variation in size and type of holdings, while being in the office allowed me to see something of the relationship between the Soil Association and their symbol holders. I also learnt about the physical and administrative set-up of the organisations and about the personalities involved, all of which later proved crucial to my understanding of producers' accounts of their dealings with Bristol. A major unanticipated benefit was that when, a year later, I wanted to get endorsement of my

[1] See Fairweather & Keating (1990) for discussion of this tendency in ethnographic research on farming families.

survey, the people at Bristol knew who I was and were predisposed to be cooperative, despite having previously turned down other requests of a similar nature.

Another short piece of voluntary work for the Bristol organisations was at the Royal Show in the summer of 1991 when I spent a couple of days staffing the information desk of the Organic Food and Farming Centre. This gave me the opportunity to talk with many farmers who were interested in organic production but had not yet taken the plunge; to watch the organic publicity and promotion machine at work and in-between times to take notes for my own use from the various documents and fact files on the information desk.

Conferences and farm walks

I attended the biannual BOF/OGA conference at Cirencester in January 1991 (before I started interviewing in earnest), and several farm walks, in Leicestershire, Lincolnshire and the Borders. These allowed me to observe the interaction between the people from Bristol and farmers and growers, and among the producers, for whom these occasions are a rare opportunity to meet and exchange information. The conference, more than anything else, convinced me that most producers were more at ease talking about the practical and technical details of their work than any abstract ideas about the future of the world or even of farming. For instance, Jonathon Porritt's inspirational speech was enthusiastically received, but it was regarded as a sort of star turn, a virtuoso performance, and no one was inclined to talk about the issues it raised. As a result I decided that in my interviews I would have to avoid asking about motivations directly and try to frame practical questions so that I could listen to the ways in which people approached the answers and to the language they used.

The opening debate of the Cirencester conference was also revealing of the relationship between producers and the Bristol organisations. The latter were blatantly looking for a mandate on the motion "This house believes that organic farming should receive direct government support". From the viewpoint of an organisation trying to promote organic methods the issue may be clear-cut, but to producers it raises spectres of increased competition and the likelihood of money going to 'the wrong people'. In the event, abstentions carried the day, with ayes and nays pretty equally balanced. If there had been clear support for the motion, Bristol would undoubtedly have claimed it as a mandate to campaign for government support; as it was, the outcome was brushed aside.

Interviews

I had originally intended to do tape-recorded interviews with about thirty producers, and transcribe them all, but I later decided to cut back on the transcribing so that I had time to do more interviewing. In the end I interviewed thirty-seven producers in different areas of the country (for map see Appendix 1, Figure 2), and transcribed the first fifteen tapes in full. I listened to the remaining tapes at a later stage, taking notes and transcribing passages of particular interest. Most of the interviews took about an hour and a half, although some lasted as long as three hours and a couple had to be done in two sessions as a result. The longer interviews were all with people on farms or gardens where I had been working.

As my central objective was to explore the diversity of attitudes and values, and the forms in which they were expressed, rather than to plot their distribution, it was not necessary to select a random or even a representative sample of producers for interviewing[1]. A strictly random selection would have been an impossible goal, partly because of the practical issues of accessibility to different parts of the country and partly as I was dependent on people's cooperation. Representativeness was a chimera, as I could not identify in advance which motivations and values were important to a particular producer, and I did not want to make the assumption that these were linked in any straightforward manner to the minimal factual information that was available.

To contact potential interviewees, I used the publicly available Soil Association list of all symbol holders, which includes names, addresses, telephone numbers and registered crops; I also had a confidential list of their registered acreages (see *Survey* section below). From this information I selected a variety of profiles of production in each of the areas of the country I visited[2]. For instance, I would choose someone registered only for vegetables and fruit, another producing arable crops and a third registered for pasture, beef and lamb. In the later stages of the fieldwork I began deliberately to choose people whom I knew to have particular perspectives that had not otherwise been represented in the interviews. I deliberately avoided interviewing farmers and growers closely associated with the Bristol organisations; officers, council and committee members, and regular contributors to

1 Nevertheless, Appendix 1, Figure 1 shows, my selection did cover producers in all regions of the country, with different sizes of farm or holding, and both with and without direct sales routes. Among my interviewees were people registered for each of the Soil Association's categories of crop, in proportions comparable to total number of producers registered for each crop.

2 For distribution of interview locations see Appendix 1, Figure 2.

the magazines. I felt that it would be difficult to disentangle these people's personal motivations from their involvement at the policy level, and their official opinions were already available to me through publications and my attendances at conferences and farm walks.

My initial contact with potential interviewees was through a letter (see Appendix 2) in which I described the project and my position at Edinburgh University, sketched out my 'identity' as previously described, and indicated that I hoped to feed the findings of the study back into the public domain in the form of a book. I wanted to stress this last point because I knew that some producers had become disillusioned about cooperating with research because of various undergraduate and amateur surveys of organic producers, the results of which have never been made public. I did not ask for a response to the letter, as I did not want to rely on their initiative, but said that I would telephone them to try to arrange an appointment. This system meant that I did not have to 'cold call' over the telephone and also gave producers advance warning before they were asked to commit themselves to an interview. People tended to be impressed by the effort that I was prepared to make in actually coming to visit them, rather than simply sending out a questionnaire, and very few refused outright to see me, although it was sometimes made difficult to arrange a particular time for an appointment, and a few people proved impossible to contact by telephone.

When I wrote and telephoned I directed my inquiry to the person under whose name a particular holding was registered, but left it open for them to decide whom it was most appropriate for me to interview. This approach allowed the possibility of talking to more than one person, and on several occasions I got interesting input from other family members who participated in parts of the interview. It would have been difficult to avoid some such involvement, even if I had wished to, given that I was often interviewing people in their family living rooms. There were also often interruptions from the telephone, unexpected visitors, farm shop customers, and (although only among the women I interviewed) the demands of young children. These inevitably disrupted the flow of the interview but I was more than compensated by the insights they gave me into a person's way of life. On two occasions where there was a husband and wife partnership they made it clear that I should interview the woman. Both couples saw it as an opportunity for the woman to voice her opinions, in a relationship where it was acknowledged that the husband was usually vocal and domineering. What actually happened was that one of the men failed to restrain himself from joining the interview session and the other,

although remaining silent, hung around so that he could listen to everything which was said.

At the places were I was working as a volunteer I of course gathered a lot of background information, but even when interviewing I was usually also shown around the farm or garden. I arranged most of my visits for about 10am, which gave people the opportunity to invite me to stay to lunch, which they frequently did. This meant that we could talk informally, and I often met other members of the family and people working on the place. I generally took some photographs, and always made notes immediately after each visit about the place and the people: their food and furniture, crops and compost heaps. These impressions of people's homes and ways of living were crucial in providing clues for interpreting the interview material. I became particularly aware of this after interviewing one producer out of context – when he visited a farm where I was working.

There were three other instances where an interview was of limited value, each for different reasons. In one case I had a technical problem with the tape recorder; only half of the interview was recorded but I realised what was happening at the time and therefore took copious notes. Another of my interviewees was a charming elderly man who was so unfamiliar with the concept of being interviewed that when I tried to ask questions from the interview schedule it meant continuously interrupting his train of thought and made it seem that I was not listening to what he was saying. As he was quite happy to explain things to me in his own way I settled for recording a rambling conversation that did cover some of the ground I was interested in, although it was not easy to compare this material with other interviews.

The third difficult interview was more embarrassing, and represented a failure in my otherwise successful policy of not specifying who in particular I wanted to talk to. Many of the early questions in the interview schedule were designed to be overtly practical, although my interpretation of the responses focused on the values expressed in the course of answering them, while the questions placed towards the end (by which time I generally had established a degree of rapport), were more explicitly personal and philosophical. Usually, the arrangement worked extremely well, but on this occasion I was faced with interviewing the proprietor of the business (the concern involved processing as well as growing) together with an employee, who was in charge of the growing side but also assumed the role of public relations officer. I was given un-illuminating public relations answers to the early questions, after which the employee left and I was faced with asking

the more delicate questions of the proprietor without having had the opportunity to develop a connection with her.

The majority of the interviews were happier affairs, and many producers genuinely valued the opportunity to expound their ideas, as well as being stimulated to think about issues that they had not previously taken the time to consider. I began by reading a short introduction which re-capped the points I had made in the initial letter, reminded them that the interview would take about an hour and a half, and asked for their assent to this. The schedule of interview questions was rather lengthy, but I did not use all of the questions with each producer. The questions that I ideally wanted to ask every time were in bold type, interspersed with plain type ones which I used only if they were relevant to the particular circumstances of a producer[1]. Inevitably, people frequently covered the ground of a particular question before I had a chance to ask it in the prepared form, and I often changed the order of the questions to avoid interrupting the flow of the conversation or asked unscripted questions in order to prompt people. Most importantly, because my interest was primarily in *how* people think, and what sort of justifications they make for their actions, I allowed producers to reply to a question at length if they were prepared to do so.

The information requested in the first part of the schedule was superficially straightforward; background information about the farm or garden, what it produces and how that is sold. In interpreting the answers, however, I have often focussed on the language used and the scope of the response, rather than on the factual information given. For example, when I asked the question "How do you learn about organic techniques?", it was to be expected that people would mention some or all of the following: traditional skills, books and magazines, friends, farm walks and advisers. However, my real intent was not to assess the relative importance of these different sources of information. Rather, I wanted to stimulate people to talk about more abstract issues which it was difficult to broach directly. This proved to be an effective technique: for example, one farmer's 'answer' to the above question became a revealing digression about his scepticism of science and progress:

> *Generally, by trying I suppose, trying and talking to other organic farmers – that's the main means of information. We had some Australians here last week... A few old ancient agricultural books... There are still a lot of fairly old people about, the next generation down from me, who remember this that and the other: little things that they did – they had to do because there was*

[1] See Appendix 2 for interview schedule and accompanying letter.

> *nothing else – they'd use certain plants and this sort of thing because it worked. There was no scientific evidence. If you read the books sort of pre-1945 I suppose, go back there, the knowledge is still written down. It's a bit like homoeopathy, that was done a hundred, a hundred and fifty years ago. That was all done then, and it's all written down if you look in the old books, there's not much new knowledge about. Because we must justify everything scientifically – it must work, must have a reason – everybody goes down that route, but there's many things haven't got a reason why they work, but they do. We're nearly going backwards aren't we? We're nearly using the techniques that have been used before. The new thing is the sprays and the fertilizers and getting more and more technology that way, that's progress they call it. Whereas we're going back the other way, actually, trying to use all the old simple techniques.*

Another approach was to ask a question like "What sort of people do you think are buying organic food, and for what reasons?". Of course, I did not intend to use responses to this question to draw conclusions about organic consumers; instead, I was interested in the prejudices and preconceptions that producers might reveal in attempting to answer it. It worked with some people, but others were diffident about answering questions which made them feel that they were being asked to represent the views of the organic movement, or to provide factual information about things that they knew little about.

With the concluding questions I abandoned the ostensible subject matter of organic production and asked directly about such things as leisure activities, use of conventional medicines, vegetarianism, political activity, whether or not they bought organic products, and the influence of books or particular experiences. I told people that it was the last set of questions, and no-one actually backed out, although some certainly considered them irrelevant and even impertinent. I also used a few very broad questions, such as "Do you feel that you have any particular ideals in the way that you live?" This was risky, in that it could stump people completely – by being too challenging and abstract – but it could, as with the following farmer when asked about his 'ideals', give the opportunity for them to explain something in their own terms without feeling that they were straying from the point of a more narrowly framed question.

> *Anything that will make do and mend. I have bought new machinery, I bought a new trailer, but generally I buy second-hand. I am quite fanatical about taking care of them, about putting them inside and oiling them and proofing, so I make things last as long as possible; makes economic sense as well as resources. Yes, I'm a bit of an old misery, that's what it boils down to. Jennifer will bring a box of chocolates back home, whereas when I'm out I could happily go shopping and never buy a thing.*

Survey[1]

Although I had at an early stage decided to conduct a survey of organic producers, I abandoned the idea on hearing complaints from several of my interviewees about the amount of paperwork that landed on their desks specifically due to their organic involvement. I became convinced that it would not be possible to achieve a good response rate. Gradually, however, I realised quite how useful a survey could be and I decided to gain credibility and increase people's motivation to respond by getting some sort of endorsement from the Soil Association or BOF/OGA.

This took a good deal of negotiation, because the Bristol organisations were also aware of producers' limited patience and time for filling out forms, although they agreed that the information would be valuable. In the end it was my initial and most ambitious proposal which was accepted: the survey would be sent out to all Soil Association Symbol holders in the same envelope as the Annual Return, which producers have to complete in order to continue in the Symbol scheme. This guaranteed that the survey was at least noticed by producers, as well as lending it some status. It was accompanied by a letter (see Appendix 1, Figures 12 and 13 for the letter and for the survey itself) and a return envelope, stamped, and addressed to the University of Edinburgh. The letter made it clear that the results would be made available to the Bristol organisations and that a summary would be published in *Symbol News*, which is sent to all Symbol holders. It also gave some background about my research, and implied that the purpose of the survey was to discover the truth behind various stereotypes rather than to reinforce them.

Having the survey returned to Edinburgh rather than Bristol was, in the event, a good idea also because they trickled in for more than eight weeks after the suggested return date. It also implied a greater degree of anonymity, although in fact I arranged matters so that I did know the identity of those who returned the survey: the return envelopes incorporated a code in the address and I spent two days at the Bristol offices putting them, along with the survey and accompanying letter, into the outgoing envelopes so that I could personally record which code corresponded to each producer.

Although I did not say anywhere that the survey was anonymous, I am still not entirely happy about the ethics of using a code number, despite the number of people who sent me their name and address unasked. I resorted to the surreptitious codes because I was afraid

[1] See Appendix 1 for findings of the survey.

that I would depress the return rate if I asked for people's names, but I wanted to be able to make use of publicly available information about Symbol holders by linking up these details with the returned forms. It allowed me to ask fewer questions in the survey, and it meant that I would have some information about the people who failed to respond. The Soil Association agreed to the strategy on condition that I sign a declaration of confidentiality which committed me to only publishing the results in an aggregate form, and they additionally provided me with a list of the symbol acreage of each producer and an (incomplete) record of when they were first registered. This information, although unpublished, was fairly innocuous, and it was something of a mixed blessing, because as I was relying on it, I did not include a question about how long people had been registered, and only later discovered how patchy the records were. Nevertheless, the success of the survey was to a large extent due to the cooperation of the Soil Association.

The aim of the survey was to chart correlations between the factual circumstances of producers (acreage; experience of conventional methods; turnover; types of crops grown and stock raised) with their attitudes about organic production. Respondents were asked to tick boxes under the headings 'strongly agree', 'agree', 'disagree', 'strongly disagree' and 'don't know', for each of sixteen statements representing different attitudes. The statements represented positions like "Organic agriculture should aim to encourage the local consumption of locally produced food" and "There should be conversion grants for new organic producers". The factual questions were on the reverse side of the sheet along with one tester: "Would you continue to use organic methods if you knew that you could make more money from conventional production?" and a concluding open-ended question.

I did a pilot study by sending a draft to twelve producers whom I knew personally. Their responses led me to clarify a few of the attitude statements, split a complex question about parental involvement with conventional production into three, and make the 'don't know' option less attractive by physically separating its tick box from the other four boxes. The question which asked people to categorise themselves as one of five types of producer (farmer; livestock farmer; farmer and grower; grower; smallholder) had originally given people the option 'other – please describe'. The pilot study revealed a "disempowered landowner" and an "environmentalist", which, while interesting, gave me no clue as to which producer category to put them in. If people were forced simply to choose one of the five options I thought they might refuse to answer altogether, so I again split the question, asking people first to circle one of five producer types and then whether there was any other way in which they would like to describe themselves. Although this still elicited some responses along the lines of "six foot two with eyes of blue", at least I also knew that

the person was a livestock farmer, and often the self-descriptions provided more useful qualitative information.

In the final version of the survey I added a question about the previous year's sale value of organic produce. I had initially thought that I could get this information from the Soil Association, and therefore had not piloted the question. This was unfortunate, as in the final survey more than two-thirds of respondents put themselves in the lowest income band, and had this tendency been revealed in the pilot study I would have been able to adjust the boundaries. There were, in any case, limitations on how I could use this information without knowing what other income a person might have – and trying to establish that would have been a survey in itself. The interviews and study visits revealed that producers' sources of income can be quite extraordinarily complex: in addition to sales of conventional produce the various members of a family could be doing part-time and seasonal work, contracting services, swopping labour and machinery with neighbours, providing bed and breakfast, renting out cottages, and sometimes living off garden produce and running a car 'on the business'.

Another late change was to print the survey on deep yellow paper. This was suggested by one of the people I interviewed as a way of making it show up in the inevitable pending pile on people's desks – the 'compost heap', as one particularly tardy respondent described it in an apologetic note. Many of the later replies had such apologies, and on some stamps had been added to make the postage up to first class. There were a substantial number of short messages, the occasional letter or photocopied article, and one Christmas news sheet.

In the end I got back 310 surveys out of 583 sent; a return rate of 54%, which was more than I had dared hope for. I analysed the survey responses (and the available information about non-respondents) using a Macintosh statistical program, *Statview*, which was flexible without being overly complex, and which was able to produce instant contingency tables for different pairings of attitudinal responses and factual information.

Structuring the Thesis

My technique with interviews was to encourage people to talk about practical matters as an approach to the abstract topics of motivation and values. This proved effective, but left me with the problem of deciding, when writing up, how much of the detailed context

to include in discussion of general themes. It was clear that many organic producers were developing personal ethics out of their agricultural and social experiences, rather than just applying their existing religious precepts, secular ethics, or pragmatic concerns to an agricultural context. In order to do justice to this phenomenon, I had to keep my analysis rooted in the concrete, day to day preoccupations of organic producers. Unfortunately, prose is essentially linear, and although footnotes and parentheses allow brief digressions, I found it impossible to pursue an abstract argument effectively while simultaneously describing the niceties of organic production that might be feeding into it. I resolved this difficulty by using case studies to provide the context and grounding for the discussion in later chapters. The 'case studies' are in fact composites rather than descriptions of individually existing holdings – an innovation which allowed me to avoid repetition and convey more information than would otherwise have been possible. The construction of the composite studies is discussed in the first section of Chapter 4.

Once I had resolved to make a set of composite studies central to the structure of the thesis, I was free to begin teasing out the strands of producers' reasons and motivations for acting in particular ways. I began by coding the returned survey forms, using answers to the final, open-ended question: "What, for you, are the most important reasons for farming or growing organically?". I also referred to responses to the self-description question (Q 22), but not to the multiple choice questions as these were analysed separately. I allocated each respondent up to four codes out of a total of twelve possibilities – omitting those respondents who did not provide enough relevant information. I had not decided in advance what codes to use; instead I read through a number of replies, identified ten different strands of thinking, and used them to code about fifty producers. I then jettisoned one under-used code, added an extra three to cope with the themes that I had not otherwise been able to fit in, and started all over again. It felt like a collaborative process; developing a conceptual framework to encompass the motives and values expressed by producers in their own words, rather than asking them to categorise themselves by my pre-determined terms as I had done in the first part of the survey. Coding the information in this way gave me a much clearer map of people's motivations and provided me with categories to work with when writing Chapters 5 and 6; five of them became the 'concern-issues' of Chapter 5.

This process of coding was facilitated by the use of the Macintosh *Macro-Maker* program, which allows a long series of key-strokes to be 'recorded'; these are then 'played' when the macro is activated by a single or combined key-stroke. In a word-processing program macros can be used simply to store a portion of standard text like an address, but they are

also capable of recording the key-strokes required to access a particular file and place the cursor at the end of it. This facility enabled me to work with twelve files open (one for each of my 'codes'), and have instant access to the end of each so that I could type in notes. I used a similar system when writing the text of the thesis: while writing each chapter I had files open for each of the others and thus could put notes in the appropriate place as they occurred to me.

When writing Chapters 4, 5 & 6 I constantly referred to my transcripts and summaries of interviews, and to my fieldwork notebooks. I also had a list of all the people I had interviewed on the wall in front of my desk. This meant that each time I wanted to make broad assessments of the importance of a particular concern or situation, I could look through the list of names and do a quick evaluation from memory of the opinions of each of my interviewees. On this basis, I have used the word 'most' (farmers, growers etc), when I judge that I am referring to over half of the specified group; 'some', for less than half but more than a tenth; and 'few' for less than a tenth. In cases where I have been able to use the findings of the survey to support such assessments this is specified in the text.

I had to take certain decisions about style. In the end I felt compelled to write in the first person rather than adopt a detached 'scientific' language. There were two reasons for this: first, I discovered that writing in an 'objective' style (otherwise described by Griffin as 'emotionless', 'detached' and 'bodiless' (1978: xv)) made it easy to draw more out of the findings of the fieldwork than was warranted. I discovered that if I used a high academic style I could write with assurance and construct convincing arguments which, although they might begin with interview material, led to conclusions which I suspected would be unacceptable to the interviewees, and which, on reflection, felt hollow even to me[1]. When I found myself in such a cul-de-sac during the early stages of writing, my way out was to address the same topic in the first person, since I found that by doing so I remained sensitive to the findings of the fieldwork. At first this was just a trick, and I planned to convert the passages into more formal language at a later date, but I became increasingly convinced that if that was how material was best written, it should also be read in that form.

The second reason for using the first person is that it would be misleading to imply that what I discovered was not determined, to some extent, by my own character. It seemed more honest to acknowledge this throughout, in the very language of the thesis, than to

1 See Griffin (1978) for a powerful discussion of the patriarchal force of 'objective' language.

perpetuate the fiction that any such study can be strictly objective. Having admitted myself into the picture, it became important to describe my stance, and a primary function of this current chapter has been to explain how I presented myself to the people I was studying and how I interacted with them, in order that readers can be aware of the viewpoint from which the information was gathered.

A more minor stylistic point is that I chose to follow contemporary spoken English and use the word 'their' as a singular pronoun of unspecific gender instead of using a convention such as 'he/she' or 's/he'. When discussing the opinions of interviewees I have been able to use the appropriate gendered pronouns, but it was necessary to decide on a non-specific way of referring to survey respondents, and 'their' seemed to interrupt the flow of sentences less than the alternatives.

The language of the composite studies is intentionally colloquial. I made no attempt to transcribe regional accents as they are not relevant to the subject matter and could be distracting, but in order to convey the atmosphere of the people and the place in each study I found it necessary to adopt a narrative style: using contractions such as 'didn't', and including words and forms of speech that interviewees had themselves employed.

Throughout the thesis, quotes from interviews and from the survey returns are distinguished either by quotation marks or, for longer sections, by being italicised and indented. All such material is derived from interviews unless specified as being from the survey.

4

COMPOSITE STUDIES

4

COMPOSITE STUDIES

Introduction

The following eight composite studies are intended to highlight the diversity of situations and attitudes of organic producers. The people and places are composites: in each composite study I have used information from four to eight interviews or working visits. This has enabled me not only to preserve my informants' anonymity, but also to fit in a greater number of pertinent details. If I had selected eight examples from amongst my interviewees, I would have been unable to describe so many different issues representatively. For example, I wanted to describe examples of a variety of different sorts of holding (full or partial conversion, with or without stock, both vegetable gardens and mixed farms); with a range of turnovers and of acreages (both total and symbol acreage); with different marketing strategies (farm shop, delivery round, wholesalers, grain merchants, co-ops, etc); run by people with or without agricultural backgrounds; and registered as organic for different lengths of time. If I had used real examples I could have chosen a selection with a spread of acreages, but then perhaps ended up with a disproportionate number of people who had farming backgrounds. If I had selected examples to demonstrate the use of different sorts of labour, it would have left the marketing strategies illustrated largely to chance.

Instead I used the findings of my survey and information from the Soil Association to choose eight sizes and types of farm that were representative of the total registered with them. Similarly, the survey was a guide in deciding what other attributes to ascribe to the characters and situations of the composite studies. The use of composite types ensured that the qualitative information presented by the studies is integrated with the quantitative findings of the survey. The statistics in Appendix 1 provide information about such things as the number of producers with less than 10 acres of symbol land[1], whilst the composite studies describe the reasoning behind the ways in which small plots of land are used. I have sometimes had cause to skew the incidence of a particular attribute slightly, as with the number of people using farm shops or direct sales as a way of marketing: two of the eight composite studies have farm shops and three deliver; these are slightly larger proportions than the survey figures of 14% and 30% respectively, but it was necessary in order to give information about different sorts of farm shops and delivery systems. In one composite study I have also described a whole series of marketing systems that the family have used over time, in order to fit in descriptions of different strategies, and in order to assert the dynamic and experimental nature of discovering how to farm or grow organically.

In addition to the parameters mentioned above, there are several broad themes which I have addressed in each composite study. Some of these derive from my original interview questions, while others emerged during the interviews; in either case I have illustrated the composite studies with incidents and situations abstracted from the interview material. In each of the eight composite studies it is made clear, for example, the sort of tenure under which land is held and, where relevant, how money was raised for its purchase; what additional sources of income a household has; and how the demands of outside work affect the management of the organic holding. I also indicate what sort of living standard is considered acceptable, and the reasoning behind that – which can range from a desire to keep up (conventional) appearances to trying to minimize environmental impact. There are issues about household composition and about differing levels of commitment to the organic enterprise within families, in terms of both practical involvement and moral support. There is the question of staffing: whether a place employs full or part-time workers, has seasonal help, relies only on family members, or uses volunteers, agricultural students and so on.

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1 179 producers; 31% of total.

The composite studies also describe the degree to which each producer is in contact with the wider organic movement – through attendance at conferences and farm walks, through marketing arrangements or personal friendships – and hint at their level of involvement with the local community and in some cases their political activism. Then there are details of farming and horticultural practice, which are included not so much for their own sake but to illustrate how knowledge is gained and decisions made, and to fill in the picture of day-to-day trials and tribulations (and even triumphs) of organic production. The central theme of this study – producers' motivations and values – is not addressed systematically in the composite studies. When it is brought to the fore, in the form of a description of someone's opinions, this is done for a number of reasons: to show that an explicit awareness of such issues is important to the producer; to show how opinions are linked to practical experiences; or to demonstrate the sort of historical chains of events that can lead people into organic production. Full consideration of motivations and value-systems is reserved for chapters 5 and 6.

The composite studies should not be interpreted as making essential connections between people's attitudes and the different sorts of farms or market gardens which they are running. For instance, in one study the farmer is by no means fully committed to being organic: he is 'testing the water', and wants to be sure of the financial benefits. The farm is partly dairy, and is placed in Wiltshire; this, of course, should not be taken to imply that organic farmers in Wiltshire are less dedicated than elsewhere, nor that dairy farmers are necessarily financially cautious. The Wiltshire farm is the shortest of the composite studies because there is little organic activity to be discussed. Since my main interest is in those who are more involved, I could only afford to do one composite study about someone on the fringes, and rather than risk stereotyping I simply did not go into as much detail as with the other studies. It was important, however, to show that not all registered symbol holders are whole-hearted in their organic enterprise.

Dairy farming was something that I wanted to mention in the composite studies, as yogurt and cheese are a significant sector of the market. However, since only 9% of producers are registered for dairy production it did not warrant a central position in any one composite study – so I put it in as a potential development on the Wiltshire farm. Similarly, there is a small but distinct category of producers who run orchards for organic fruit juice; I worked this into one composite study by reference to an acquaintance of one of the more central characters. Some such minority interests were omitted altogether on the grounds that they were not sufficiently widespread on the ground. The prime example here is that of community supported agriculture: although the idea is much debated within the organic

movement there are few full-blown working examples. However, a few specific ideas associated with community supported agriculture schemes have been taken up on a significant scale and this is reflected in the composite studies[1].

Eight composite studies seemed to be the minimum needed to convey the diversity of organic farmers and growers[2]. There is no one composite study which I could point to as being more typical or normal than the others, but none of them are intended to be extreme examples. I do not wish to make claims of statistical significance on the strength of thirty-seven interviews, but for the purpose of constructing the composite studies I did pick out details and opinions which were supported by several interviews, rather than drawing out the peculiarities of particular individuals or holdings. For instance, three of my interviewees had attempted to ward off rabbits or bird pests by talking with them, and I therefore felt that it warranted inclusion in one of the studies, although I would not have done so had the practice been mentioned by only one person. Naturopathy was mentioned by four people, and is in one of the composite studies, whereas homoeopathy comes into several of them as it is much more widely practised. Circle dancing, a very 'alternative' pastime, was mentioned in four of my interviews, and the view that a washing machine was an essential domestic appliance in a household that was otherwise ecologically frugal came into three of them. The influence of travel abroad was common, and this is carried through into the composite studies; several of the growers interviewed had travelled or worked in Third World countries, and several farmers had visited Australia. The composite study in which a family has a bath in the living room is based on one identical real instance and another where the bath was in the kitchen – when not in use it was covered by boards and the kitchen table was moved over it. The use of this example in a composite study is also supported by several other people who demonstrated a similar disregard for convention in their living arrangements.

I also used the interviews extensively to construct the biographical details of the families in the composite studies. There were four practising artists among the families of interviewees to support the allocation of this occupation to the wife of a farmer in one of the composite studies. Many of the producers who were not from farming families had

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1 Community supported agriculture schemes are discussed in chapter 9 as a possible future direction for organic producers.

2 The composite studies reflect the fieldwork in not including people who have never registered despite claiming to use organic methods, or who have dropped out from the symbol scheme, or those who are registered under the Demeter label or with OF&G but not also with the Soil Association.

academic backgrounds, and their past and current academic posts included university jobs in anthropology, tropical agricultural development, international relations and biological sciences; this is represented in the composite studies by the part-time farmer who works in the Geography department of a university and specialises in Third World development. A woman was the prime motivator behind the organic enterprise in nine instances, in eighteen it was a man, and in ten it was a joint project; the composite studies broadly preserve this ratio.

Many of the anecdotes in the composite studies are lifted wholesale from interviews. For example, the account of a child being poisoned by DDT tablets is taken from an interview; as is the description of an outbreak of pasteurella among lambs; and so too is the way in which one farmer solved his dilemma of no longer wanting to shoot pheasants, but enjoying the social side of local shoots, by following them with his dog to pick up wounded birds.

As the people and the holdings in these studies are composites, their names are necessarily fictitious. I have also used fictitious names for wholesalers and co-ops since they too are essentially composite. On the other hand, the promotional, registering and advisory organisations which make up the visible face of the organic movement in Britain have all retained their proper identities and names.

The composite studies are all written from the viewpoint of 1992; thus, where details are given about the experiences of a producer, say, twelve years ago, that means 1980. Historical details described in the composites are integrated with the actual state of development of the organic movement at the appropriate time; this is especially relevant with regard to things like marketing opportunities and public opinion.

The text of each composite study is preceded by two photographs of holdings which were among those used as a basis for the study. These help to evoke the disparate atmospheres of different organic farms and gardens. Indeed, the numerous photographs which I took in the course of fieldwork were also useful when I was writing the composite studies; I referred to them in conjunction with my notebooks and the interview material.

Summary of Composite Studies

Oaklea was bought by Alan Blair and Ruth Walters when they decided that they were fed up with city life and wanted to do something more worthwhile. Their tiny garden is filled with polytunnels, and after several years of haphazard growing and naïve mistakes they are beginning to make a go of it, partly because of their involvement in a local producers' co-op.

At Westgate Farm David and Anne Currie have converted 150 acres of the family farm to grow organic grain and vegetables. David's mother bristles with disapproval, but his father is quietly sympathetic and David is in any case determined to do something adventurous rather than just put up with the continually falling farm income.

Richard Davis, on the other hand, has always been organic, even before he knew the word. His parents had a farm just up the road which never saw chemicals until the old man died and Richard's brother took over the farm. Richard then rented a cottage with a couple of acres and grew vegetables to sell locally. He's a local eccentric: bachelor, pacifist and vegetarian; he keeps his garden going when other people his age have long ago retired.

Henry Gardener's family have farmed the 950 acre farm Marthorpe for generations. In his last years Henry's father became concerned about the way that the wildlife on the farm had disappeared. Henry shared his worries, and gradually got involved with the Soil Association. More than half the farm is now registered as organic and he has a conversion plan for the rest, drawn up with the help of the Elm Farm research centre. His wife, Pauline, had no objection to him changing his farming practice, but is resistant to the way in which the organic ideals are beginning to encroach on household life.

Caroline and Chris Bateman spent many years campaigning for the Green Party and were active members of other groups such as CND. Chris's job in the university also allowed him to specialise in areas he felt were important, but Caroline's job was more restrictive, so they decided to try putting green principles into action and bought a farm. It is high, remote, and without electricity; friends of theirs tried growing vegetables there at one stage, but really it is a livestock farm. It took them many years even to finish building the house because they made planting trees the first priority.

Jan Arnold and her daughter Holly have ended up living at Rowantree, a semi-communal mansion house with a big walled garden. Jan runs the garden bio-dynamically, although she has little previous experience of the methods. While learning about growing she also has to cope with the way other people in the group feel they have a right to be involved, but don't always do things in the way she had planned.

John Gibson has struggled to make a go of his Wiltshire dairy farm; his wife Louise does B&B and works as a doctor's receptionist, but it is still hard to make ends meet. He hopes that diversifying into organics will make his arable land more profitable, but he is not sure whether converting the dairy enterprise would be feasible.

Martin and Lily Horsefield run a rambling market garden and a farm shop. It always feels like family, although many of the faces have changed over the years: people come to work for a week or a year, and their son runs an organic market stall in town.

Alan Blair & Ruth Walters

Oaklea

Black plastic used for weed control; young leeks planted through it.

Polytunnel crop of lettuces; note overhead irrigation lines.

Alan and Ruth bought their cottage with its acre of land and derelict outbuildings four years ago. Alan has just reached 40, Ruth is 38, and they have two girls: Bettony, 4, and Lauren, 2, as well as Ruth's son Tom, who is 12. They'd both previously been working in London – Alan was a computer programmer, and Ruth had been employed part-time on an adventure-playground project while bringing up Tom. Alan also played in various folk bands. The fiddle player in one of the bands was Hugh, an organic grower from Essex. Over the next few years Alan and Ruth found themselves spending many of their weekends at Hugh's place, and grew to admire his lifestyle, especially when they contrasted it to how they were used to living, in London. Although initially they were rather appalled by the composting toilet and the chickens which invaded the kitchen, they couldn't help but notice that Hugh and his family were genuinely happy in a way that none of their London friends seemed to be.

During this time Tom began to have problems at school because the teachers couldn't cope with his excess of energy. Ruth had always found his liveliness a challenge, but it wasn't until Hugh started talking about the influence of diet on children's behaviour that she considered the possibility that he was suffering from hyperactivity. She'd always thought that it was just how he was. At Hugh's suggestion, and because of the difficulties with the school, she tried out an additive-free diet. Tom changed dramatically: he calmed down – so he was less disruptive at school – but he also became able to concentrate in a way that he never had done previously. Instead of always rushing from one activity to the next he started to be able to finish things, and this gave him a lot more satisfaction and self-confidence.

Although Ruth had gone vegetarian some years ago because she couldn't bear the thought of animals being killed, they were not otherwise very concerned about what they ate, apart from trying to cut down on fats and sugar like everyone else. She still thought that children should have meat, so she tended to cook easy things like sausages for Tom and then microwave ready-made meals for herself and Alan. Alan was an exceedingly good cook, when he set his mind to it, but he rarely found the time and he felt restricted by not being able to cook meat for Ruth. When they realised the effect that diet had been having on Tom they began to consider what they ate themselves: they started to avoid E-numbers, and began to read newspaper articles about pesticide contamination of crops. They tried to buy organic vegetables as well, but they were terribly expensive, and it

meant a special shopping trip as their normal supermarket didn't stock anything organic. They also found that they had to spend more time cooking than they did when they relied on frozen meals, and it wasn't easy to fit that in around their busy weekday schedules. When they visited Hugh it all felt much simpler; they didn't have to worry about people giving Tom fizzy juice or sweets because there just weren't any, and the vegetables from the garden were so fresh and full of taste that Alan began to experiment with vegetarian cooking, which he had previously scorned.

When Ruth got pregnant again they decided that it was time to make a break. By now Alan felt strongly that he wanted to be doing work which felt more worthwhile than his computer stuff, more honest and productive somehow. It was difficult to express that to his work-mates, although they could understand his desire to be more in control of his own life. Ruth felt that the job she was doing was valuable, but she didn't look forward to making the choice between being stuck at home with a new baby or working and abandoning it to a childminder. With the money from Alan's London flat they were able to buy Oaklea outright and still have some money left over to keep them going for the first few years. Ruth would be able to set up in business as a potter – she'd done a lot of classes in London and had become reasonably skilled – and Alan could run the garden. He'd picked up a bit from working with Hugh, and had bought all the organic gardening books he could lay his hands on. They planned to share the housework and cooking more equally than they had been able to so far – Alan's job had always taken up much more time than Ruth's – and Tom was pleased because Ruth had promised to let him have a dog.

They moved to Oaklea in the early spring, which gave them little time to prepare the garden for the first year, and Ruth couldn't do any heavy work because the baby was nearly due. The acre of land was partly a neglected kitchen garden and partly lawn. The area which had previously been garden was thick with weeds, so they covered it in black plastic and old carpets to try to kill them out. Ruth had read somewhere about growing potatoes under plastic simply by cutting slits in it and placing a chitted seed potato under the edge of each slit. They didn't have much faith in it working, but it wasn't going to be a lot of extra work so they put down several bags of seed potatoes this way.

Apart from the potatoes, they decided to concentrate on the lawn area, and Alan worked hard to get the ground ready in time. He cut the turf off and stacked it so that it would rot down and could be sifted for seed compost as they had done for Hugh. It was hard to loosen up the compacted soil, even with the rotavator which Alan had decided was part of their essential capital expenditure. They had some manure delivered from a local farm where

the cattle had been wintered indoors; it was not very well rotted, but Alan turned it into the soil and hoped for the best. They'd intended to have a soil analysis done, but never got around to it; local farmers seemed to be using a lot of lime, so they got ground limestone from a local quarry and put that on as well. The area was divided into four plots and each started at a different point on a basic four-course rotation: potatoes – early and late; legumes – runner beans and sugar peas; brassicas – broccoli and beetroot; roots and alliums – carrots, onions and garlic. They had decided not to take on too many different crops until they had learnt a bit more.

Alan ridged the soil carefully for the potatoes, and tried to get a good tilth on the rest of the area, but the hard soil and clods of manure made it difficult. He planted out the broad beans that they'd had growing in yogurt pots on all the windowsills, and put the sugar peas in, once the weather seemed warm enough. Tom earned his pocket-money by scaring off the pigeons that week. Alan started off the broccoli in a sheltered flowerbed by the house where the soil was better, intending to plant them out once they had a good start. In fact the slugs in the flowerbed ate so many of them that he moved the surviving ones when they were still quite small. The onion sets and garlic were a bit late going in, but they didn't seem to mind the rough soil and grew fast; the carrots, on the other hand were very patchy in their germination because half of the seed disappeared into cracks between the lumps of soil.

Bettony was born at the end of May, and Alan rather abandoned the garden for a while; they were both preoccupied with the baby and also began to turn their attention to the amount of work that needed doing on the house itself. The weeds took advantage of this, and at one stage hardly any of the crops were visible, except the potatoes, and the beans and peas which climbed happily up the bamboo constructions which Ruth and Tom had built for them. Then some friends, a couple from London, came to stay for a week to meet the new baby. They ended up spending most of their time in the garden re-discovering the broccoli and beetroot, and trying to thin the carrots – it was awful having to pull up the ones in clumps when there was often a gap of a foot or so before the next plant.

The way their crops were sold that first year was almost as haphazard as how they were grown. Hugh had a farm shop, and an established link with a wholesaler. They'd realised when they moved to Oaklea that it was too remote for them to run a shop: there was no chance of passing trade – it was proving difficult even to give adequate directions to visitors! There was a co-op of organic growers in the area, but Alan had always been set against the idea of joining a co-op; he said he'd had enough of meetings and

alternately being told what he should do and being held responsible for other people's actions. In any case, according to the Soil Association list the closest organic grower to them was fifteen miles away. They didn't get around to making contact with either of the two potential wholesalers in their part of the county until the sugar peas were already beginning to crop. Both wholesalers wanted to give preference to their existing growers, although one of them took some peas towards the end of the season. Neither of the wholesalers were happy about coming to pick things up: it was a long way off their normal routes, and the quantities that Alan and Ruth were offering were comparatively small. Alan wondered about taking vegetables to them in the car, but when he worked out the petrol cost and the time it would take him, he understood why the wholesalers were wary about sending their vans over. He tried approaching the wholefood shop and the vegetarian cafe in town, but they were already being supplied with vegetables by the co-op. Finally they made contact with a man who ran a vegetable stall in the market, and he sold most of their sugar peas, the broad beans, and later some of the other crops too. The price was low; there wasn't an organic premium as the man didn't want to label anything as organic in case people started asking what was wrong with the other stuff, although he did put up a sign saying that they were locally grown. Then Ruth made friends with the assistant manager of a hotel in town who was also keen to buy vegetables from them, although what she was really interested in was getting them fresh, rather than them being organic. Alan began delivering there on Thursdays when he took stuff in for the market stall.

They'd been subscribing to the *New Farmer and Grower*, although they were not members of anything and had not applied for the Soil Association symbol (just more bureaucracy, said Alan); in September they saw a notice in the *New Farmer & Grower* saying that the Organic Growers Association was organising a walk around a market garden about thirty miles away. When they went along, they discovered that the host was one of the growers involved in Green Foods, the co-op, and that many of the other co-op members were also there, along with a few curious locals, about a dozen people from Bristol and The Elm Farm Research Centre, and various students and hangers-on. It seemed to be more of a social event than anything else, although Ruth and Alan were impressed with the growth of the crops in comparison with their own and picked up several ideas that they determined to try for themselves – like using old mushroom compost as a mulch for beans and peas. The most striking thing however, was that the vegetables were all being sold as organic, at a good price and to willing customers. The co-op people did admit that there had been a glut of peas and beans at the height of the season, but said that they'd planned

round it to some extent, with one member using polytunnels to get an early crop, and others planting late varieties to cover the end of the season. The co-op was selling to shops and restaurants, wholesalers, and was intending to start supplying Safeway directly next year, as some of the root vegetables were being sold there already, via the wholesalers. They said that it was important to be able to offer customers a wide range of produce, and since no one person would be able to grow all the varieties themselves, they had decided in a series of meetings in the winter what each of them would grow the next year. Their main problem seemed to be lack of capital – in order to supply Safeway they would have to pack the vegetables, but had no money to start up a pack-house, and so were intending to use the premises of one of the wholesalers: working in the evenings when his staff went home. They also said that they couldn't keep up with demand for protected crops, because the cost of putting up new polytunnels meant that several of their members could not expand as fast as they would like to in that direction. Ruth and Alan had anticipated being impressed by the garden, as they were aware of how much they had to learn about growing things and keeping weeds down, but they also found themselves fascinated by the apparent ability of the co-op members to work together and market their produce professionally. They'd always thought of co-ops in terms of cafes and bookshops which were friendly to visit but profoundly unbusinesslike and pervaded by an atmosphere of 60's hippydom. The people from Green Foods didn't seem like that at all.

During that autumn they began thinking more about the co-op, and visited a couple of the other growers. They still had a fair bit of capital left from the sale of the flat, and were prepared to spend some of it on polytunnels, if it meant that they would be able to sell their produce more effectively than they had so far. At first Alan's plan was to go into protected crops, since there was apparently a demand for them, but he still intended to do the selling himself. Gradually he became more receptive to the idea of being part of the co-op. In any case, it became obvious that they were going to have to join the Soil Association and get the Symbol for organic vegetables if they wanted to be able to ask for a premium price for them – they were still selling mainly to the market stall. The onions and garlic had produced well despite being choked with weeds, the beetroot was magnificent and the broccoli looked promising. The carrots, on the other hand were a patchy crop and had forked badly – because the manure was fresh, according to the man from the market stall. He loved vegetables, and grew carrots in his own garden despite selling other people's every day. He wouldn't sell their forked ones though, nor the potatoes which had been grown under plastic, which had come out in the most extraordinary shapes. Tom made monster animals out of them, and they tasted fine, but

they could not be sold. The other potatoes, the ones Alan had so carefully ridged up, were not much good either, as they had suffered from what the man at the market diagnosed as wireworm – you should never put potatoes in after grass he said, and you're lucky the beans got away. He couldn't say what was wrong with the monster potatoes, but suggested that they buy a lot of chickens and fatten them up on them.

Ruth couldn't cope with the idea of raising chickens to be eaten, but they did get a dozen hens for the eggs, and a cockerel which had to be beaten into submission once a week or else it got extremely fierce and started attacking Tom. Tom was training his puppy to be a chicken-killer, but Honda, the puppy, seemed to have pacifist tendencies. The chickens came from Steve and Verena, who were the co-op members fifteen miles away. They were very interested in the story of the monster potatoes, and were convinced that it didn't have anything to do with being grown under plastic. They thought it was much more likely to be spray drift of some herbicide. Ruth and Alan agreed that it was a possibility, as the potatoes under plastic were the only crops near the wheat field at the back. Ruth had been worried about Tom when she'd seen the farmer spraying, but she hadn't thought of the effect on the garden. When they spoke to the farmer about it he insisted that there was no health hazard – "been doing it for years" he said – but he admitted that the spray might well have turned their potatoes funny and promised to keep further back from the fence-line in the future. "I'd have done it this year if you'd told me you were growing potatoes" he said. The farmer was scathing about the idea of organics generally: "It's all right for the likes of you who don't have to make a living from it, but this country's got to feed itself; just look at Africa, and that's organic, because they can't afford to farm properly". Alan was really angry with the farmer about the weedkiller spray; he felt as if their patch of land had been invaded, and he wanted to try to claim compensation for the potatoes at least. Ruth thought that they should avoid making enemies in their first year and eventually persuaded him not to take it any further. Instead, they went out and bought a lot of hawthorns from a tree nursery and planted the beginnings of a hedge along the boundary. It was clear that the hedge wasn't going to be much help for quite a few years though, and Alan had little faith in the farmer really being more careful about spraying. It was worry about spray drift that finally made them decide to go for polytunnels. They reckoned that if they put several along the line of field they would act as a windbreak and keep spray drift off the rest of the garden to some extent – and the crops inside would be protected as well.

In November they bought the tubing and plastic for two polytunnels, and there was a week of warm weather which meant that they were able to get them up and put the plastic on before it turned cold. The friends from London who had rescued the broccoli and beetroot in June came back to help, and Steve and Verena drove over for the day to show them how to stretch the plastic. Over the winter Alan put in an irrigation system, and they bought four more tunnels second-hand, from a nursery that was closing down. They dismantled these themselves, and bought a trailer for their long-suffering Astra estate in order to get all the bits back home, rather than hiring a truck for the day. The rotavator broke down when they were breaking up the soil in the polytunnel area, and when they got the bill for the repair Alan decided that it might be a good idea to learn a bit about how to repair machines himself. The Agricultural training board were running a weekend course, which cost rather less than the repair had done, but turned out to be more about tractors and combine harvesters than rotavators. Next time they saw Steve he said he'd take a look at it for them next time anything went wrong.

They had finally decided to join Green Foods, although Alan still had some misgivings about it; he feared that it would mean losing control over their own place. However, there weren't any problems during the winter planning meetings as the co-op needed more protected crops of all sorts, so Alan had a pretty free rein over what he chose to grow in the tunnels. The co-op had negotiated a contract with a processor who wanted beetroot for pickling, and Alan agreed to grow a lot of it in the outdoor area, in the hope that it would do as well as the last lot had done. Alan did have to agree, however, not to sell direct to the hotel in town, or indeed to the market stall. The hotel was put on the route for the co-op deliveries.

When the man came to inspect them for the Soil Association Symbol they thought he would be worried about the spray drift, but in fact he was more concerned about manure and composting. He said that they would have to inform the Soil Association if there was another spray drift incident; he approved of their efforts at making a hedge and the location of the polytunnels; and he suggested that they ask the farmer to let them know which days he intended to spray so that they could close up the polytunnels and watch how close the tractor came. On the other hand, he wasn't at all happy about them putting fresh manure on the garden. He said that it should have been composted for a minimum of three months, and that in future they would have to find out what the cows had been fed on, and possibly even send some of the manure to be analysed before being given permission to use it. He was not at all impressed with the heaps of weeds, bean haulms and potato

tops that they called compost heaps and recommended a book that would tell them how to build a heap which would heat up properly. He also suggested growing a green manure crop on the land they didn't intend to crop the following year, to build up the organic matter in the soil, and said they should plant comfrey in any odd corners so that they could use the leaves to make their own liquid feed. However, they did get the Symbol for their vegetables, as the garden had not been used at all for two years before they came and that was allowed to count as the conversion period.

It took them quite a while to get the hang of making compost, even with help and advice from other co-op members, and in their second year they relied a lot on bought-in seaweed fertilizers, which was a major expense. They began keeping all the perennial weeds separate, tied up in black plastic bags, hoping that they would eventually rot down. That spring they planted up the two original polytunnels, and one of the second-hand ones; the others were put up just in time to get late summer crops out of them. They grew cherry tomatoes, mini cucumbers, celery, lettuces and oriental greens, peppers, aubergines, fennel, land cress, and an early crop of beans and peas. Everything seemed to need harvesting at once, and they began getting up at four in the morning in order to pick before the tunnels heated up in the sunshine. One of them would then drive the thirty-five miles to the co-op collection point, a cold-store on one of the farms, while the other looked after Bettony and Tom. Tom was restless because all his friends were going off on holiday, and Bettony was unhappy in the heat. Just when it all began to get too much for them Laura turned up – the woman who had visited with her boyfriend twice before. They had just split up, and Laura had left her job because they worked in the same office. She was desperately unhappy, but quite prepared to distract herself by picking vegetables all morning and taking the children off to the beach.

Selling through the co-op was certainly easier than it had been when they were trying to find their own outlets. Ruth and Alan simply sent in an estimate every Saturday of what they thought they would be able to harvest in the following week, and took whatever they picked to the collection point. They were getting more for their produce than they could have hoped to through the market stall, even though a percentage of the sales went to the co-op account. Out of this the co-op paid the woman who did the delivery round, two sales co-ordinators for the time they spent on marketing produce, and an hourly rate for the time various members spent in the pack-house – although that side of things wasn't working too smoothly yet. Some money also went into a contingency fund. In September one of the two local wholesalers went bust and Ruth and Alan really felt the

worth of the co-op system: they were paid out of the contingency fund for a month's worth of vegetables that the wholesaler had taken on credit. In the end the co-op got most of the money back, but it saved them a lot of worrying. They had been owed more than any of the other co-op members, because they had been concentrating on summer crops and had sold about a quarter of what they would produce that year in the previous month, much of it to that one wholesaler.

The thing that impressed them most of all was that there was no resentment from other co-op members about them benefiting from the contingency fund even though they had been members for less than a year. Alan began to take the co-op more seriously, and, in particular, began to develop a computer program to help in the winter planning of what crops each member would grow. By Christmas he was the official growing co-ordinator, although this was not a paid position. He also talked to the farmer where the cold-store was, and they found a corner of his yard where waste plastic could be stored so that all the co-op members could bring old tunnel sheets and black plastic together until there was enough for it to be collected for re-cycling.

In the following spring Laura was still with them, and with Ruth pregnant again they were glad of her help. She'd been doing freelance graphic design work over the winter (and had re-designed the logo for Green Foods as a gift), but she also wanted to have her own corner at Oaklea. There was no point in her growing vegetables, so she decided to try dried flowers. She bought her own tunnel, and they marked out a corner of the garden that gave her some outside space as well, and she planted them up with an incredible range of flowers. Tom was now taking most of the responsibility for the chickens, and he had learned to chase the cockerel before it chased him, even though Honda still showed little interest in the game. Watching their first crop of chicks grow up had turned Tom into a determined vegetarian. Actually, no-one at Oaklea really wanted to eat them, and they ended up giving the young cocks to Verena, who took them off squawking in the back of her Landrover and vowed that they would be in the freezer by nightfall.

Lauren was born in June that year, just when things in the garden needed all their attention. In August the rotavator was stolen from inside one of the tunnels, and they couldn't even claim insurance for it because it hadn't been locked up. Alan went to a few farm sales to try to get a second-hand one; he had no luck, and they had to buy one new, but he did bid successfully for a hand seed-drill. It worked beautifully, and had five hoppers for seed that were adjustable for different sizes of seed and row widths. It was a bit awkward to use in the tunnels though, and in the end they gave it to Steve and Verena,

who had much more need of it on their five acres of outdoor crops. In December Laura moved to Leeds, leaving them with piles of unsold dried flowers fading in her polytunnel.

Now, four years after they came to Oaklea, they still find themselves living from crisis to crisis. The younger children take up a lot of the adults' time, particularly as there are no close neighbours with children of the same age. The kitchen-living room is strewn with toys and there is little space to do big jobs like trimming the tops off the onion crop. They re-roofed the old sheds for storing vegetables and for Ruth's pottery workshop, but it is difficult to work out there and keep an eye on the kids at the same time. Ruth has found it impossible to get enough time to herself to be able to concentrate on pottery. She hopes to start seriously once Bettony is at school and Lauren can go to nursery. Alan is missing his folk music, and would like to play in a group again, but it would mean leaving Ruth with the kids several evenings a week. They're wondering about having someone living in again, like Laura, to make childcare easier, but there isn't really space in the house so it might mean buying a caravan. Meanwhile, Tom wants a 'workshop' – he is into bicycles and is constantly repairing them and swopping parts from one bike to another. The local roads are an ideal switchback of hills and curves for trying them out, and he also cycles down the valley to school and to visit his friends in town.

They began to get worried about money, so Alan has started doing some computer programming for a friend who set up his own company. In the garden they've concentrated almost entirely on intensive crops in the tunnels, but the garden still isn't bringing in enough for them to live off, and they got through their savings sooner than they'd anticipated. The turnover has increased each year, but so have the costs; this year they've had an Employment Training guy, Jed, working for them, and have had to pay wages for the first time. Jed does one day a week at college and four with them, but they're never quite sure when he's going to turn up because he's a committed anarchist and doesn't approve of timetables. When they were picking in the summer it was quite a problem, they never knew what time to get up in order to get the work done, as they didn't know whether he'd join them. But he works well when he is there and Alan enjoys listening to his theories and philosophical ideas. Jed is vegan, and Alan's beginning to feel bad about keeping hens; they never have managed to face up to killing them, they just give them to Verena when they stop laying. Not even Alan eats meat now, but they buy a lot of cheese and milk as well as having their own eggs. Alan reckons that if you're vegan you end up depending on products from the third world, like chick peas, and soya beans for tofu. Jed says there's lots of things that would grow in this country but people just haven't

got around to trying them out, and he's been reading about how to make leaf curd instead of tofu. Privately, Alan is resigned to letting Jed experiment with some of his exotic crops if he stays on next year.

They already have some experimental plots; the co-op decided to do some trials on bio-dynamic preparations, and Ruth offered to co-ordinate it. She uses a corner of the garden at Oaklea, as well as sites in the gardens of two other co-op members. In each place she has grown the same crops, from the same batch of seed. With each type of vegetable, half of the crop is a control and on the other half she's used the preparations, although it's taken a lot of book-work to even begin to understand which preparations she should use and when. She's intrigued by the mystique of it all, but it seems to contradict a lot of how she's used to thinking about the world. The results in this first year have been mixed, some plants really seemed to benefit, but with others it made little difference. She's determined to try again next year and do everything at exactly the right time.

Ruth is also interested in the bio-dynamic preparations for compost heaps, although it's not part of the co-op trial. Their compost never does seem to come out quite right, perhaps because they've never been able to raise much enthusiasm for that side of things. Even the turf stack they made in the first year is still there, well rotted but unused, because there has always been something more urgent to do than sieving compost, and they've tended to panic and buy stuff in when they realise that they're late in sowing something. The Soil Association rules about buying in seed composts are tightening up now though, so they are going to have to start making their own.

Green Foods have had their own pack-house running for two years now, and have established links with Safeway and Sainsbury, as well as having their local delivery round; surplus is sometimes sold in the wholesale vegetable market, but it's pretty much a last resort. There are constant grumbles about the requirements of the supermarkets for perfectly straight cucumbers, and parsnips that will fit into plastic trays, but they don't seem to be able to influence supermarket policies at all. It seems a bit unfair that the local customers then get what is rejected by the supermarkets, but no-one in the co-op has been able to come up with a solution, except to hope that the Soil Association will manage to do more promotional work and that customers will at least start complaining about the excessive packaging. They'd hoped that they could sell out-graded vegetables to processors, but in some ways they are as picky as the supermarkets. The pickled beetroot never really took off anyway, but this year they've been selling root crops to a company making organic vegetable soups. There seem to be new regulations about packaging and

food processing every week; one member of the co-op has been delegated to try and make sense of the new EC food regulations and work out how it is going to affect their operations.

There are almost thirty members in the co-op now, and it's beginning to feel a bit too big. They're trying to decide whether to split into two groups geographically, or to separate farmers from growers. There are also questions of how closely the two new co-ops should work together, and how they can avoid competing against each other. It needs to be resolved quickly, or postponed until next year, because the winter planning meetings should start soon. Alan has passed on his job as co-ordinator, partly because he and Ruth really want to get away for a bit. They haven't had a holiday since they came to Oaklea, and can hardly afford it now, but the friend Alan's been working for has a cottage in Spain and he's offered it to them for two or three weeks in the New Year.

David & Anne Currie

Westgate Farm

Spinach crop cut back for weed control; re-growth on right.

Brush hoe.

David was brought up on Westgate Farm, in East Anglia, along with his younger brother Mark who is now working as an engineer in Cambridge. Their parents, John and Marjorie, still own half the farm, which consists of 350 acres of arable land. The two brothers each have a quarter share although Mark has never been involved in the day-to-day running of the farm and even his weekend visits have become increasingly infrequent. David and Anne married almost ten years ago, soon after David finished his agriculture degree. They now have two daughters, Katie and Susie, aged eight and six respectively, and a four-year-old boy called Matt.

David's parents had been keen for the young couple to travel and see something of the world before settling down at Westgate and, as a wedding present, paid for their flight to Australia. David and Anne spent the best part of a year working on several different farms and visiting some friends of Anne's mother. Before this visit neither of them had thought of organic methods of farming as being viable. At David's college it had only ever been mentioned as a joke but in Australia they met several people who were enthusiastic about the principle of organic farming. They became intrigued by the possibility of using organic methods, despite never having seen a working example of an organic farm. Anne, like David, had been brought up on a conventional arable farm, but she had always been wary of handling farm chemicals because of an incident in her childhood. Her parents had a gadget to kill insects which used DDT tablets heated on an electrical coil. One day a delivery man left a pack of tablets on the kitchen table because there was nobody around. Three-year-old Anne had eaten some, thinking they were sweeties. When she began to feel ill, her mother noticed that the packet was open and phoned the doctor. They rushed her to hospital to have her stomach pumped, but it had been a close thing. Although her parents stopped using DDT in the house, no-one in the family had ever questioned the need for farm chemicals.

When David and Anne came back to Westgate from Australia they shelved the idea of experimenting with organic production because there seemed to be quite enough changes planned already. Although John and Marjorie were only in their mid-fifties and both fit and active, they moved out of the farmhouse into their 'retirement' cottage. The cottage was not big enough for all their furniture, and Marjorie would not consider getting rid of anything, so Anne made her home in the big house while still surrounded by Marjorie's things. Marjorie also continued to tend her beloved rose garden at the front, and Mark used

his upstairs room at weekends, so Anne felt that they never really had the place to themselves. The whole family still had Sunday lunch together in the big house after church, and after a few attempts at making the meal herself and having to put up with Marjorie's criticism, Anne decided that it would be less of a performance to let Marjorie do it, even though it meant letting her take over the kitchen for the day. Even the parents' dog, Black Sambo, treated the big house as though it was still his home. Anne couldn't bring herself to call him Sambo because the name seemed racist, so she tried to teach him to answer to Blackie but he only responded when it suited him. When Katie was born Anne put her foot down and banned Sambo from the house, although it was more on her own account than the child's. Marjorie doted on Katie, who was her first grandchild. She knitted a beautiful shawl for her christening, insisted on calling her Katherine, and often looked after her all afternoon so that Anne could get some rest after being kept awake at night.

Both John and Geordie, the farm-hand who had been with them since before David was born, were fascinated by machines, and they had graduated from doing occasional repairs for neighbours to buying up old machines, stripping them down, rebuilding them and hiring them out. They now ran a contracting business with a combine, a sprayer, and a lot of specialist machines for planting and harvesting vegetables. David really wasn't interested in machines except as tools for getting jobs done on the farm; it had always been Mark who had been keen on the mechanical side of things, but his father had initially insisted that if he was taking on the farm he should learn about the contracting business as well. David simply didn't enjoy working on the machines and arranging contracts with other farmers. After four frustrating years John resigned himself to the fact that David was never going to develop the contracting side, although it was now providing a more reliable income than the farm. David had also found the original arrangement difficult because he hadn't been given a free rein with the farming. Eventually, they agreed to separate the farm from the contracting and to run them as independent businesses, accepting the fact that the farm was likely to run into overdraft. John continued with the contracting side and David took complete responsibility for the farming. Geordie worked roughly half his time with each of them, but the arrangement was very flexible, depending on what needed to be done most urgently at any one time. They set the farm up as a partnership, and John and Marjorie legally passed over a twenty-five percent share each to David and Mark. David was then effectively employed by the partners: his parents, his brother and himself. He also ended up working directly for his father quite a bit, driving machines when they were contracted out. John, on the other hand, no longer

busied himself with farm repairs during the slack months, which suited him as it gave him more time to devote to lay preaching for their Methodist church. He also began work on re-building the vintage Wolseley that he'd bought years ago as a project for his retirement.

Anne decided to take over the farm accounts, which had previously been handled by a farm accountant. After a few months Anne ended up doing the contracting business accounts as well, since there were still a lot of decisions to make about where to place particular expenses: the farm Range Rover, and the big old Volvo which was mainly used by Anne to ferry the kids around, ended up under the business in order to take some of the pressure off the farm. Since they were saving money by not paying the accountant, she decided to get a computer. She did an evening class to learn the basics of how to use it, and arranged for a local business adviser to come round and help her to set it up with an accounting system.

The farm at this time was almost entirely arable, producing wheat, barley, oilseed rape, potatoes and carrots. In addition, John had leased a corner of a field near the main road to a friend's son who wanted to start rearing turkeys and needed somewhere to build some units. John arranged to clear the muck from the sheds for him and spread it on the fields, which cut the farm's bill for artificials a bit. Then there were three small copses which were good cover for the pheasants they raised each year. John was planning to dig a pond near one of them to encourage duck, but he didn't have a digger, and it hurt to think of paying another contractor to do the job so he kept putting it off. There was also a bit of parkland across the road from the house; they'd never ploughed it, mainly because Marjorie liked the view of the old oaks from the living room of the big house. It was let to the local racing stables as a gallop, and although that only brought in £30 a week it was always exciting for visitors to watch the horses racing, and they got a crop of hay off it as well. After the hay the Brownies and Guides came for their summer camps and Marjorie spent a few busy weeks helping out; organising their water and firewood and so on.

David was keen to try some new ideas, and in any case they knew that they would have to make some changes in order for the farm to be viable; it had been riding on the back of the contracting business for some time. David's first innovation was a relatively successful crop of seed clover, but Anne was still interested by the idea of organic production, and they were encouraged by the premium prices being offered for organic wheat and organic potatoes. The main difficulty was the need to bring livestock onto the farm to graze the ley years of the rotation. Neither of them had worked much with animals, except with sheep in Australia, and even John didn't have much experience. Marjorie was perturbed at

the idea of increasing the overdraft to buy livestock when they might all die of some dreadful disease or deficiency, and she started quoting horror stories about the amount that could be spent on vet bills. She also worried that the market for organic produce was unstable, thought that the crops wouldn't grow anyway, and declared that no fancy organic ideas were ever going to stop her from spraying her roses. John, on the other hand, once he had come round to handing over the management of the farm to David, was accepting of his desire to experiment. Despite his best efforts, arable production on the farm had been making a loss and he realised that they needed to diversify; if David wanted to do organic farming rather than breed Mohair goats or something, so be it. Although he didn't admit it to Marjorie, John did have a few private doubts about excessive chemical use in any case; he'd read bits of Rachel Carson's book years ago, and he remembered when a whole row of trees on a neighbour's farm lost their leaves one year after a pilot spraying herbicide forgot to turn off the sprayer when he was banking the plane. He had a niggling worry that during his years on the farm the soil had become less fertile, and in some places there was visible erosion. Looking after the soil on his farm had been a luxury he felt he had been unable to afford, but if there was a way of doing it that might pay, it was worth trying. John counselled caution though, and suggested that they only converted a couple of fields at first. In any case, many of the things David and Anne were suggesting reminded him of how his father used to farm before the war, but he couldn't believe they would work in the modern world. There seemed to be so many advantages, and yet the experts were all against it. John did, however, talk with one of the farmers he contracted to, who had sheep and a beef suckler herd, and asked him if he'd be interested in renting some grass keep. The guy was keen in principle, which allowed them to postpone the question of buying in stock themselves.

Anne heard a programme on the radio about *Organic Farmers and Growers,* and sent off for information about them. She also got some leaflets from the Soil Association, but it all seemed terribly complicated, and listed all manner of things which weren't allowed without suggesting any alternatives. A man from OF&G offered to come and visit them and he walked the farm and told them which fields he thought would be most suitable. In the end they put about 100 acres down to a grass and clover ley, bought some electric fencing rather than go to the expense of fencing it permanently, and rented out the grazing during the two year conversion period while David tried to get the best out of the rest of the farm. Marjorie was still opposed to the organic idea, but it couldn't be denied that conventional production of wheat and potatoes was financially precarious – although the oilseed rape was generally better, and in some ways they were better off with part of the

land bringing in a small rent than if they were cropping it. David spent a lot of time driving tractors on other people's farms during this period, and Anne was busy with the girls, and with Matt when he came along.

When Katie was nearly five, Marjorie decided that she should go to a good school, as David and Mark had done. Anne and David were obviously in no position to start paying school fees, so Marjorie just went ahead and arranged a place for Katie at David's old school and began paying for it out of the money she'd inherited from her father. She also decided that the children should learn to ride and bought them a Shetland pony which was reputedly good-tempered: bomb-proof, as her previous owner had said. Bonny was quite a pet, and as solid as a rock near fast cars and even when low-flying aircraft went over, but she loved human attention so much that she took every opportunity to escape and make her way up to the house. David had fenced in some paddocks on the edge of the parkland, but Bonny really much preferred to loiter in Marjorie's precious rose garden. There was a footpath which led past the house, over the road and across the park, and Bonny began to rival the racehorses for the attention of walkers. She was a persuasive character, and people would sometimes untie the gate for her, thinking there was no harm in letting her wander across the whole park rather than being stuck in one corner of it; it somehow didn't occur to them that she could then get straight onto the road. This drove Marjorie up the wall, and she already had little enough patience with walkers, having suffered them for years as they trouped past on sunny weekends and tried to peer through her kitchen window until she felt like an exhibit at the zoo. She thought they ought to start charging; people paid to go to Butlins, or to a safari park, why shouldn't they pay if they wanted to walk in the countryside? It was all talk of free markets now, so they ought to be allowed to charge people for the privilege of walking on their farm; and then she could organise them to keep away from the house and make sure they didn't have a chance to let Bonny out.

They also began to have problems with the cattle escaping. They'd chosen the fields by the road for conversion because the road made a bit of a gap across to the neighbour's field so they didn't have to worry so much about spray drift. The electric fencing, however, proved to be something of a headache. The first time the cattle got out they went across the road into the neighbour's wheat, and the insurance company had to pay substantial damages. The second time they trampled David and Anne's crops, and the insurance wouldn't pay because the cattle were kept on their farm and were therefore deemed not to be damaging a third party. Part of the problem was that the farmer who owned the cows

only got over to check them once in every two or three days – already they'd gone without water for days once when the electric fence had fallen down over the water trough. Anne decided to take on the job of checking them, or at least the fences, every morning. She'd hoped to start getting the kids out for an early morning walk up the road, but the girls much preferred to watch breakfast television, so she usually left Susie and Matt in front of the TV at Marjorie's and did a quick look round with Blackie after taking Katie to school. Anne generally tried to keep the children away from the farm. The yard was full of pallets of fertilizer sacks and drums of herbicides and so on, and there was always machinery being shunted about; every time the children were around the yard she thought about farm accident statistics. She took them to ride Bonny in the park and along the footpath, but otherwise she encouraged them to play in the garden (somewhat to the detriment of Marjorie's roses), or else in the house. The girls had discovered the games on her Amstrad, and it was often hard for Anne to pry them away from it so that she could do the accounts.

Occasionally, Anne took the children up to feed the pheasants. Geordie had some pens up in the copse that was furthest away from the footpath, and raised three or four hundred birds each year. They shot about half of them, and Marjorie seemed convinced that walkers' dogs were responsible for killing most of the remainder; John reckoned that the traffic on the road got most of them, or else their own stupidity – forgetting where the food was put out and then dying of starvation. The whole family enjoyed the social side of the shoots, although Anne didn't often go out with the men. Mark always made a point of coming home for the weekend, and Marjorie took the opportunity to cook a special dinner with a big roast. They'd started getting some of their meat from the farmer who rented the grazing rather than going to the butcher; he brought them a whole sheep jointed or a share of one of his beasts, and they put it in the freezer. Marjorie still preferred fresh meat but for Anne it worked out a lot cheaper, and it was nice knowing where it was coming from. None of them liked eating turkey any longer, having seen how the birds were kept. The guy who leased a corner of their land for turkey sheds from them was a nice lad, and he seemed to be making a go of the business, but when David cleared out the muck to spread on the fields there were dead birds and syringes and goodness knows what mixed in with it. He let the muck rot down for a bit before spreading it, but it still wasn't pleasant.

Their friends in the shooting syndicate had been teasing them about the organic idea from the beginning, and couldn't see much point in putting land down to grass for two years when it could be growing a good crop, although they did concede that financially it might be

less risky since they didn't have to put any money into it. They were impressed that the first crop of wheat grew at all, even though the yield was only about two-thirds of what they got from their conventional fields that year. The growth pattern was quite different from conventional wheat; it got badly left behind in the spring when everything else seemed to be surging ahead, but it went on growing steadily and caught up about the time when David was spraying growth retardants on the conventional wheat. The organic crop went to OF&G, and they got a good price for it. They had piled on the turkey muck, and spent a fair bit on calcified seaweed, but it hadn't cost nearly as much per acre as they would normally expect to spend. They'd been told that cereal yields would increase to between seventy and ninety percent of the expected yield of a conventional crop after a second ley period – because by then the fertility and soil structure would have had time to improve. David and Anne were encouraged, and after hearing about the prices that organic vegetables were fetching in Safeway's they decided to try some field vegetable crops as well. They were used to growing potatoes, and thought they'd try onions as well. They'd have liked to do carrots, but guessed that there was probably too much carrot fly in the area, as there were several conventional carrot growers nearby. Partly to appease Marjorie, they decided to seek professional advice. ADAS disappointed them by saying that they didn't have anyone who could advise on organic systems, so they asked someone from the Elm Farm research place to come and walk the farm and give them some pointers. They couldn't face the cost of them doing a full conversion plan, but the man was helpful and encouraging. He supported their idea of a six year rotation: two years grass and clover ley, wheat, potatoes and onions (and other vegetables in the future), wheat, and then oats undersown with grass and clover again; but he suggested leaving the ley for a third year if there was a problem in establishing the clover. He acknowledged that there were no organic means of preventing carrot fly, other than barrier methods, which they were not willing to consider, on grounds of cost, but he was able to reassure them a bit about potato blight by suggesting Bordeaux mixture in an emergency. The most immediate outcome of his visit was that they decided to join the Soil Association and apply for the symbol, as it seemed that it was more widely recognised for vegetables than OF&G's. They also realised that it was about time they saw some other organic farms and they started subscribing to the *New Farmer and Grower* to find out about places they could visit.

They did go to see a couple of local organic producers, but neither were doing vegetables on a field scale, which was what they wanted to learn about. Anne and David were both somewhat appalled by the standard of living which one family seemed to be prepared to put up with: semi-derelict farm buildings, a house which had been half-renovated but

abandoned at that stage in favour of the garden, and a caravan seemingly full of dogs, children and poultry. They came away feeling relieved that Marjorie had decided at the last minute not to accompany them that day. David had embraced the idea of trying organic production partly because he liked the idea of doing something special and different. He also wanted to be in the forefront of things, to be one step ahead: if fertilizer use did become increasingly restricted because of nitrate run-off then they would have an advantage if they were already running a system which didn't depend on artificials. He had also seen organics as a way of adding value to his farm crops without getting involved in processing or small-scale specialist production. Organic vegetables were featuring in glossy magazines as an up-market and desirable purchase, but David was now beginning to feel as if, by becoming organic farmers and actually growing the produce, they were going out on a limb with only a few hippy back-to-the-landers for company. However, it was clear from the articles in the *New Farmer and Grower,* and from Elm Farm, that there were professional organic farmers about, even though none were close by. Both David and Anne wanted to have a better idea of what they should be aiming for. Their wheat had done well, but they couldn't simply grow grain crops in an organic rotation. It had been very satisfying to grow organic wheat when grain merchants were actually advertising to buy it, but vegetables were a bigger investment risk, the markets were less assured. They had heard that organic vegetables were often marketed through co-ops, but Mark absolutely put his foot down at the thought of being tied in with a whole lot of other organic people and having to go along with group decisions even when it was against their own interests. David and Anne didn't feel quite as strongly about it, but they didn't really want to lose their independence either. On top of all this, they still hadn't resolved the problem of stocking the farm.

It was John who re-kindled their enthusiasm, by secretly booking them into the BOF/OGA conference at Cirencester as a Christmas present. There were nearly three hundred delegates, and a tremendous atmosphere of optimism and enthusiasm. They listened to addresses by several of the people whose articles they'd read in the *New Farmer & Grower,* and it was good to be able to put faces to their ideas. Jonathon Porritt made an inspirational speech and thus provided David with several new arguments for organic methods which he intended to use on his sceptical friends at home. There were technical sessions which tackled production issues such as rotation design and pest and weed control with seriousness and an impressive attention to detail. Anne bought a copy of Nicolas Lampkin's book *Organic Farming,* which was just out, so they would now have something to turn to when they had a particular problem or query. The *New Farmer & Grower* was

interesting reading but you had to take what came in terms of the subject matter; there was something tremendously reassuring about having a book with an index, so you could look things up. Of course, the first thing David turned to was the section on carrot fly, and he gloomily read aloud "of all the horticultural pests, the carrot fly presents perhaps the most serious problem..."

Cirencester also proved to be a good place for meeting people; they made friends with several other farmers and agreed to exchange visits later in the year, and they broke their journey home by staying the night with a couple who farmed in Northamptonshire. They also made contact with a wholesaler who was keen to buy good quality potatoes and onions in bulk. David and Anne were confident of being able to lift and handle the crops efficiently, as they were handling conventional potatoes in any case and had done contract work with other people's onions; it was the prospect of weeds, pest, and diseases that bothered them. The way people were talking at Cirencester convinced them to trust for the moment in the principle that a healthy crop was unlikely to succumb to pests, and the technical sessions at the conference had given them some guidelines about varieties of potato and onion which were disease resistant. Weeds seemed to be the main problem; they resigned themselves to paying gangs to weed by hand if necessary (they had gangs to help with the conventional harvest in any case), and on their return to Westgate they persuaded John and Geordie to work on inventing a machine to hoe between onion rows. John bought an old scruffler through *Exchange and Mart* and adapted it. It was towed behind a trailer and had a seat where the operator moved a bar to keep the hoeing blades running in-between the rows. The technique depended on skill and concentration both on the part of the tractor driver and the person behind. Geordie remembered scrufflers from long ago, and told of violent disputes over whose fault it was when a row of the crop got turned in along with the weeds.

They decided to convert another fifty acres, so that they could have twenty-five acres in each year of a six year rotation. This time they compromised their principles and got a set-aside payment for the land, to avoid having to let the grazing and have the problem of escaping beasts, even though it meant that the land would be out of production for longer than the minimum two years needed for conversion. Both John and David had strong feelings about set-aside and hated to see land unproductive and derelict. It annoyed John almost as much as hearing about people wasting their time and the country's money on the dole; he felt that they should show a bit more initiative and start something up for themselves if they couldn't get a job. There had to be limits though – the most dramatic

local example of entrepreneurial spirit was a complete blot on the landscape: what used to be a proper farm was now lying useless in set-aside while the owner concentrated on his intensive pig units – which stank – and an airstrip where yuppies from London buzzed about learning to fly. There was another farm nearby that was now a golf course.

The fifty acres of set-aside was alongside the part they'd already converted. It was easy for them to divide the area up as they chose, since most of the hedges and field boundaries on the farm had gone long ago, but they had to juggle the rotation plan a bit at first because they'd already grown a crop of wheat on the initial hundred acres. In the end they decided to fertilize with more turkey muck and seaweed, and put most of the land into a second crop of wheat, leaving fifteen acres to try with organic potatoes, onions and a few carrots. In the following year they would put twenty-five acres back into grass after only two years cropping so that it could come back in to wheat sooner and, hopefully, do a larger acreage of vegetables. It would have been simpler to keep the hundred acres all in the same year of the rotation, but they wanted to be able to produce some vegetable crops in every year to make the marketing easier.

A man came to inspect them for the Soil Association symbol soon after the Cirencester conference. He was happy to accept the land they had already converted as being eligible for the symbol, but he had some worries about how conventional and organic produce were segregated. He wanted them to designate a storage area just for organic, which was difficult, as they were used to being able to shift things around as the occasion demanded. They accepted that it would make sense to avoid using a barn for repairing machines that might have chemicals on them, like sprayers and so on from the contracting side, if the area was going to be used for organic storage later in the year; but it was going to be more difficult to avoid putting all the potatoes under one roof just because some were organic. He also insisted that they hose down the potato grader and the entire area they used for sorting before using it for organic crops. They would also not be allowed to grow the same variety of the same crop both organically and conventionally. In fact, they hadn't planned to, because they had put disease resistance before yield in choosing varieties for the organic side, but they were a little worried about getting involved in so many restrictions although, again, they could see the point – it meant that produce could not so easily be substituted by an unscrupulous farmer. The inspector was also concerned about the lack of a physical boundary between the organic and conventional parts of the farm. They assured him that they did the spraying themselves and therefore could take extra care with it, and pointed out that they had sited the organic area so there was only one stretch

where this was a problem. He suggested that they apply for a grant to help with planting a hedge, and in the meantime keep sprayers and fertilizer spreaders well back into the conventional field. David reflected that a hedge would also provide a bit of extra cover for the shoot and that he might be able to persuade Marjorie that it was an investment on those grounds. As they anticipated, the question of stocking the farm also came up. The use of poultry manures from intensive systems was likely to be prohibited by the Soil Association in the near future, so they couldn't go on relying on the turkey muck for fertility, and in any case they had to have stock to graze the leys when they had land back in that stage of the rotation. As far as the Soil Association was concerned it was acceptable to let out the grazing, but it had been less than satisfactory in practice. Anne and David decided that they would have to have a meeting with Mark, and David's parents, about investing in livestock.

Mark still thought that organics was a passing fad and worried that by the time they'd converted land and, more crucially, invested in stock, the market would disappear. He and his fiancée came down for Sunday dinner occasionally, but apart from discussing things over the dinner-table they took little interest in the farm. Anne and David felt that since they were doing the work they ought to be allowed to decide how the farm should be run. They finally managed to push Mark and Marjorie into a compromise by agreeing not to convert more than 150 acres (unless the government started giving some sort of payments on organic land) and in exchange they got the go-ahead to buy some stock. Anne started reading up about the management of sheep and suckler cattle, and went on a couple of Agricultural Training Board weekend courses. David set to work building some handling pens, and converted one of the old tractor sheds so that it could be used for cattle in the winter, but he baulked at the idea of constructing a sheep dip so they decided to rely on renting a mobile one when it was needed. When their first batch of thirty sheep arrived that summer, it was Geordie who took control because his father had been a shepherd. Within a month he'd got hold of a Collie pup and started training it up. Anne and David gratefully left him to it and concentrated on sorting out the six suckler cows and their assortment of calves that they'd bought through the man who'd previously rented the grazing. They weren't going to run the animals organically at first, as they reckoned they'd have enough to do learning how to look after them conventionally. They certainly didn't want to get involved in marketing meat themselves, but if there was a proven demand from supermarkets in a couple of years' time, and if the muddle about approved abattoirs was sorted out, they thought they might try it then. However, Anne started to get interested in homoeopathy as a result of reading about organic stock raising. She even

used a few of the remedies on herself and the children – for things like colds and fevers. They did appear to help but she didn't think she'd ever trust them for anything major.

The organic vegetable crops that year grew well; they planted the onions and potatoes at the same time as their conventional ones, and drilled a few lines of carrots as well, just to see how they'd do. John's adapted onion-weeder kept the spaces between the rows pretty clear, and they sent a gang of hoers through a couple of times as well. The onions didn't seem to mind a few weeds, but David had to put up with comments from locals who stopped on the road to see how he was getting on with his 'organic lark'. The onions did need a bit of extra water however, so they put a tank through the field every now and then just as they did with the conventional ones. With the potatoes they kept ridging them up at first, to cover the weeds until the potatoes took over. Then they followed the advice in Lampkin's book, and delayed harvesting the potatoes until well after the haulms had died back, even though there hadn't been much sign of blight in any case.

When they'd bought the carrot seed they asked specially to have it undressed, as the Soil Association required. The seed merchants had been most perplexed and in the end would only agree to sell it to them if they signed a piece of paper saying that they would not hold the company responsible if they got poor germination results. Germination hadn't been a problem, but they had needed a lot of hand weeding, and then the carrot fly got really bad, so they had to abandon the crop altogether and plough it back in.

The main problem with the vegetables was a couple of major night-time raids. They always lost a bit of veg beside the footpaths, but it had always been people taking what they could carry. This time someone was obviously filling up a van. Anne joked that perhaps they'd picked Westgate rather than one of the other farms because even thieves wanted organic vegetables and they'd seen the new Soil Association sign that she'd hung by the road.

That autumn was the first time they'd ever tried eating organic vegetables; neither Anne nor Marjorie had ever considered paying extra for organic food in the supermarket, and in any case they did most of their shopping in local shops that hadn't even heard of the word organic. The potatoes were nice, but that might have been the variety rather than because they were organic; the onions didn't seem much different. Anne went on using them in preference to their conventional crop until they'd all been sold, but then she just went back buying from the shops. They'd never kept more than the odd bag of their own vegetables back after harvest. Sometimes Anne wondered why she ever bothered cooking

anyway, as Marjorie was always happy to step in. She was especially prolific in her production of cakes and biscuits because she baked regularly for the Women's Institute stall.

All in all, they spent more on labour for the organic vegetables, but less, of course, on chemicals, although the calcified seaweed wasn't cheap. They got about a thirty percent premium on the vegetables that were actually sold as organic. Most of the potatoes and onions were going to the wholesaler they'd talked with at Cirencester; he re-graded and packed them, and sold them on to supermarkets. They had to hold some of the crop for him though, because he didn't have enough storage space at the height of the season. Since they didn't have any sort of temperature controlled storage themselves it was a bit of a worry, but in the end the vegetables all got sent away fairly quickly as the wholesaler was selling British produce in preference to imports. He planned to switch to imports only when he'd run out of home-grown supplies. They sorted everything on the farm before sending it away, and they put organic outgrades in with their conventional stuff as there didn't seem to be much of a market for outsize organic produce. Even without the premium they were getting a reasonable return on the money they'd put in. They began to feel confident about doing a larger acreage next year, knowing that even if they couldn't sell the whole crop as organic they would still be able to cover their costs by selling it as conventional. In a sense it was less of a risk than conventional because there wasn't the same capital outlay.

As with the wheat, the economics for vegetables seemed quite good when they looked at a single year, although they had to keep reminding themselves that the land was going to be in grass for at least two years out of every six. They were both getting increasingly caught up by the whole idea of being able to do without chemicals; David had heard about organic beer and wondered about growing barley for malting in the future, though it was not a crop they'd ever tried before. He was also fascinated by the idea of growing organic sugar beet – he'd met someone who produced organic milk and wanted to make ice cream but couldn't find a source of organic sugar; the trouble was in processing it since all the factories were working on far too big a scale to be bothered with doing a few tonnes of organic. Anne wanted to sell organic hay to people with ponies who had the money to pay for something special. David had even volunteered to do a talk for a local farmers' group about organic production. He wasn't at all happy with the idea of being seen as a crusader, but he did want to take the opportunity to let people know that he was

managing to make a go of this organic thing that they had been ribbing him about for years.

They finished that year fairly confident about their organic enterprise. They planned to try some additional vegetable crops in the spring, depending on what their wholesaler thought he'd have particular need for. The costs were likely to be higher, as they anticipated having to spend about two thousand pounds on calcified seaweed and Marinure because of no longer being able to use the turkey muck. They were now impatient to get the rotation sorted out and the soil into better health so that they could do without that sort of input. They wouldn't be able to grow any wheat in the following year, because most of the land they'd converted had already had wheat for two years, and weeds had been significantly more of a problem in the second. They'd do a few oats on the area they'd used for vegetables though, and when they were through the set-aside period they could start cropping on the additional fifty acres. Marjorie continued to disapprove of Anne's interest in the farm; she felt that Anne should be concentrating on the house and the children. In fact, although Anne was very much involved in the planning she did little of the practical work; she hoped to be able to do more once Matt started school.

Richard Davis

Longacre

Cloches bring on crops early; webbing sacks protect kale from rabbits.

'Recyling depot'; much of what is on this dump will eventually be used.

Longacre is a narrow triangle of land in the fork of a road junction, a few miles down the Fife valley from where Richard's father used to farm. Richard's eldest brother, Ewan, still runs the old family farm, although they long ago gave up the tenancy of another farm which they used to let. The second brother left home for work in the city and Richard became a postman in order to be able to stay. Richard was never given the choice to farm for himself, although he helped out a lot while his father was still alive. Ewan took over the running of the place when the old man died, and it wasn't until then that Richard left the farm. He rented Longacre, a tiny cottage with two acres of land which is part of a big local estate, and he has lived there ever since. His job as postman was never full-time, so he was able to run Longacre as a market garden from the beginning, but he has now reached retirement and so spends all of his time on the garden.

Richard has always been something of a maverick; his family have Quaker roots, but as a young man at the tail end of the war he became more forthright than any of them about pacifism. He also became vegetarian, at first as an extension of the pacifism, but he soon became interested in the health benefits of it as well. He was an early member of the McCarrison society, which explored the links between food and health, and through them he learnt about Naturopathy. The Naturopathy, in turn, led him to organic ideas – because the principle that the key to good health lies in what a person eats means that the way in which food is grown should be examined. Naturopathy also recommends fasting one day a week, and for many years Richard did so. He now only fasts if he catches a cold, but has become increasingly rigourous about only eating organically produced food, especially since it has become easier to find a wide choice of organic products. He is highly suspicious of conventional forms of medicine, and has not taken prescribed drugs even for his arthritis, although it is making work in the garden increasingly difficult. A Naturopathic diet means cutting back on sugar, not drinking tea, and eating such things as brown bread and natural yogurt – which he did well before most people had even heard of yogurt.

In Richard's opinion, modern medicine is like sticking plaster, a way of holding things together when people ought to be facing up to more fundamental questions of how they live and what they eat. In his eyes, farming has the same problem: relying on artificial fertilizers draws attention away from the fact that the soil is not being adequately fed, just as doctors prescribe medicine – which may be superficially effective – but fail to

consider the changes in diet which could prevent a condition recurring. Some medicines will cure a specific ill and yet have side effects, or weaken overall health; similarly, pesticides get short-term results while weakening the soil-plant system. Richard's opinions tend to be uncompromising, and his usual trenchant comment on conventional growing is that it is sinful to put chemicals on the land.

Richard's personal maxim is "plain living and high thinking". The cottage at Longacre illustrates Richard's philosophy: even the living room is bare and comfortless; the furniture is elderly; the TV, which he rarely uses, is a small black-and-white one; and his radio could probably command a fair price as an antique. Although he is widely read, he has relied a lot on the library, and hence even his collection of books is not very extensive. He doesn't get a newspaper, because he reckons he would need to buy them all to be able to read through the lines and get a balanced view; he thinks that it is important to know what is going on in the world, but that newspapers generally don't tell the whole truth. He is an avid Radio Four listener though: he relies on it for news and current affairs, follows the Archers and often tunes in to afternoon plays. He has subscribed to the *New Internationalist* for years, and also to various more obscure publications like the *Fourth World Review* and the broadsheet from the *Organic Living Association.* He gets the *New Farmer and Grower,* and the *Living Earth* from the Soil Association, and is passed on the conventional *Grower* by his middle brother, who buys it in order to keep in touch with the life he left when he moved to the city. Richard uses the *Grower* mainly for the farm-gate prices it lists, but it also serves to remind him of the lunacy of conventional growing. Both of his brothers rather scorn Richard's spartan existence but he doesn't see the need to add to his possessions and he'd always rather repair something than replace it; his retort to them is to re-define the supposed "affluent society" as "the effluent society".

Richard claims to have invented the polytunnel; his first versions were square-section, and constructed out of plastic plumbers' piping, but the principle was the same as the modern tunnels he has since bought. He generally avoids using plastics because he is worried about possible adverse effects of the electromagnetic fields which they are said to radiate. He won't allow plastic to come into contact with food and so his kitchen has only wooden, metal, ceramic or glass utensils and surfaces. He doesn't use plastic for mulching either, partly because he considers it a wasteful use of finite resources (it is not possible to recycle the thinner grades and is uneconomic to uplift small quantities) but mainly because of the 'radiation', and he picks fruit and vegetables into baskets and wooden trugs rather than plastic containers. He does, however, make an exception for the plastic polytunnels.

Protected areas enable him to grow tomatoes, peppers and cucumbers – which are popular and which he could not otherwise produce at all – as well as extending the season of many other crops and allowing him to grow his own seedlings for planting out. He does have one old greenhouse, but its wooden frame needs continual maintenance, and he is even more worried by the fumes from wood preservative and paint than by plastic tunnels. He also uses a lot of old-fashioned cloches to protect seedlings when they are first planted out and to bring on a few salad crops early in the year. Protection is crucial because Longacre is fairly exposed. There are no trees apart from the old orchard and a few beeches around it. Richard has never been one for planting trees or hedges even as windbreaks – he thinks they would take up too much goodness from the soil on a patch as small as his – but recently he has put his jerusalem artichokes in a line along the side of the main road so that their height gives the garden some protection from the wind, and indeed from traffic fumes.

Richard tries to grow a bit of everything, to give his customers variety. He has never really pushed the garden for high yields, he just grows as much as he can manage by himself and there are usually patches of land left fallow or planted to green manure crops. He is proud of the fertility of his soil after thirty-five years of his husbandry and if anyone ever asks to be shown around the garden he will start with the compost heaps; he has an alchemist's fascination for the process that transforms rubbish into rich humus. The compost is used in the tunnels and, mixed with peat, for propagation in the greenhouse. The outdoor areas get well rotted manure from his chickens – there are neat heaps of it outside the orchard where the hens are kept – and horse manure from a neighbour's stable. Collecting the horse manure has become rather too much for him recently, and he has considered getting cow muck instead as he could have that delivered, but he is more worried about what might be in it; he thinks that cattle are more likely to have been given antibiotics, or additives in their feed. However, his own seventy-odd hens, despite being free-range, are fed on commercial pellets and some of that probably comes through in the muck. Richard keeps hybrids rather than pure breeds – despite the fact that they need to be fed pellets to keep them going – because they are much better layers and, apart from his pension, egg-money is his only year-round source of income.

In addition to manures and compost, Richard limed the whole area when he first came, and regularly uses hoof, horn and blood meal to replace some of the minerals that he is taking from the soil by selling vegetables. One year, when some of the tunnel crops didn't seem quite right he used a seaweed-based feed, but although it did give them a boost he

doesn't like that approach, he would rather that they were being fed from the soil. He is similarly wary about using derris; he has done so on occasion, but worries that it will also kill the ladybirds which might otherwise be able to keep pests under control. In any case, Richard doesn't like deliberately killing things, even aphids, although he does, in desperation, trap mice in the tunnels when they cause too much damage. He also kills off the older hens himself; he prefers the honesty of that to sending them away somewhere, and he knows that he can despatch them cleanly, but also because he is fiercely independent and would hate to rely on anyone else for something like that. Even when he has had people helping him with the garden it has tended to be unsatisfactory. His nephew from the city used to ask for work in his school holidays, and Richard felt obliged to find him things to do, but he found it more trouble than it would have been to do the jobs himself, what with showing him what needed to be done and finding him the tools and clearing up after him. All the nephew really wanted to do was to drive the tractor, an old grey Fergie, but Richard wouldn't trust him with it and did all the ploughing, manure spreading and ridging himself. Then there was a time when Richard was supplying a wholefood shop with vegetables and they wanted more produce, or else they were going to go over completely to a big supplier. He planted extra that year, and arranged to have a YTS lad in to help with the work, but the boy turned out to be a disaster so Richard stopped selling vegetables to the shop altogether, although they are still the main outlet for his eggs.

Apart from the few years selling to the shop, Richard's vegetables have always been sold direct to customers – he used to deliver to about twenty households. It is now down to ten plus a Camphill home for mentally handicapped adults which, although it has its own bio-dynamic garden, can't produce enough vegetables. Then there are a few people who call at Longacre for vegetables; he doesn't have a sign to encourage them, but he has been there for so long that people know about him and his garden. He tries to discourage locals from calling, he would rather deliver to them than have them come by, but there are a few people who live far beyond his delivery round; one as much as eighty miles away. He would rather they phoned in an order first, but they seem to prefer choosing things straight from the garden.

Richard only delivers for eight months of the year, because there isn't enough produce to make it worth-while in the early months, and also because his ancient Morris Minor van is not very reliable in cold or damp weather. He used to make up individual orders for his customers which was very time-consuming but recently, after reading about how

Community Supported Agriculture schemes work, he has started delivering a standard order in one of two sizes to all of his customers. It makes things a bit simpler although the eggs are still done to order, as are the apples and pears when they ripen, and there are some people who simply don't want things like jerusalem artichokes or swiss chard. He encourages people to return boxes and bags to him so that they can be re-used, and with some of his customers he collects their kitchen scraps for his compost heaps.

It used to be local people with old-fashioned tastes who bought Richard's vegetables, but he now also delivers to several smart young couples who are concerned about the health of their children. There was also one man who came by every week for nearly two years because his son had cancer and they hoped that an organic diet would help. The boy eventually died, and Richard was really upset that the father never came back again, because it showed that he had seen organic food as a sort of medicine or cure which had failed, rather than as a prerequisite for health for all of his family.

Richard has always thought that people should pay for what they are getting, so although he bases his prices on those in the *Grower* he is unapologetic about adding a substantial organic premium. Most people in this country don't value good food, he reckons, they will pay for video machines and foreign holidays but not food, and that's why they get sold rubbish. In France and Italy people value good food more, and are at least prepared to pay for vegetables being fresh, if not organic. Organic growing means more labour and therefore the produce should cost more, although he doesn't think that the yields are necessarily lower in the long term. What he really objects to is the way all vegetables, but particularly organic ones, are priced up by supermarkets and wholesalers. Farm-gate prices are ridiculously low, but consumers don't even get the benefit of that as some wholesalers routinely double the prices of produce, and then supermarkets smother vegetables in plastic packaging and use the expense of it as a justification for their high mark-ups. Richard admits that it all makes sense in terms of creating profit, which supermarkets are manifestly good at, but he claims that 'there is more to efficiency than making money', and would prefer to see growers like himself supplying local communities.

Longacre was one of the first places to gain the Soil Association Symbol, when the scheme started, but Richard has become increasingly disillusioned with the whole organisation, and intends to drop out of it. He sees the necessity for organic farmers and growers to be regulated and inspected if they are going to sell into the mainstream system; he is all too aware of the parallel with free-range eggs – there are far more sold in the shops than could possibly be laid by the number of free range hens actually running about. But he

doesn't think that 'efficient' production and marketing is in fact the right way for organic production to be going. He objects to the way the Soil Association have been working with the major retailers, because for him the organic ethos is completely opposed to the centralisation, profit-orientation and consumerism of supermarkets. He has also found it difficult to comply with some of the more recent organic regulations. In particular, he wants to be able to use peat for his potting compost; there is no good substitute for it, and he only uses about three grower bales a year which is insignificant compared with the quantities used by mushroom growers or by people who apply it as a mulch. Richard has also clashed with the Soil Association about little things like the seeds he uses; sometimes he gets them from the local hardware shop, and perhaps they are dressed, but he objects to having everything he does monitored and controlled. The Soil Association has got a lot more bureaucratic and restrictive since the EC began to get involved in the organic thing, and he resents paying a fee each year just to have them interfering. He doesn't think that any of his established customers would mind if he was not registered because they know him well enough by now; the Camphill people might ask a few questions, but he could always have them come round to look at the place themselves.

Although until now he has made an exception for the Soil Association, Richard has always had a mistrust of organised groups because of the whole issue of power and control. He was a member of CND in its early years and still agrees with all that it stands for, but objects to the way that it is organised and the way that members become pawns in the power games of those at the top. With the Green Party he feels that there are similar problems, compounded by the fact that many green policies would never be voted in – it would take a dictatorship to implement them. Even so, his sympathies are with them, and he might well have got involved at the time when the local groups still had a fair degree of autonomy, if there had been any active groups nearby.

Richard hates the way that people stop thinking for themselves when they get sucked into a system, and for him the prime example of this is conventional farmers. He sees modern farming as a substitute for good husbandry and hard work; when farmers start to rely on bags of nitrogen they give up making judgements and real decisions. Eventually they find themselves asking chemical reps what to put on the fields and relying on vets to prescribe things to keep their animals healthy. Organic production shouldn't be anything special, according to Richard; it's just that most people have forgotten what good husbandry is about. Once farmers start down the chemical road it is difficult to reverse because they have put themselves in the power of the chemical companies. The next stage

will be biotechnology; it is the same multinationals that are developing it and they are already patenting things to make sure that they retain their control.

However, the power exerted by chemical companies is only one aspect of what Richard perceives as the terminal decline of the countryside. He also worries about city people starting to view farming areas as a mixture of museum and playground. It isn't happening much in Fife yet, but he was shocked on a recent visit to the south of England to see the number of 'rural life' museums and 'country parks', and worse still a 'farm shop' which was like an American shopping mall crossed with a zoo. Even without such developments Richard feels that his local community is dying. So many people fail to value their roots, many like his brother have moved away, and although people have also come into the area they don't seem to like staying put; they move on again when their children have grown, or for a new job, or just to be somewhere else. There isn't a school in the village any more, and instead of the doctor and the policeman who everyone used to know, people have to go into a surgery ten miles away, and the police are strangers on some sort of rota system and mostly stay in their cars anyway. Richard even finds himself missing the old minister at times. He would like to think of organic producers as supplying fruit and vegetables for the local community, but the community as he knew it in his youth is simply disappearing. Few of his customers, apart from the elderly ones, even seem to know each other.

Although Richard does regret many of the things which have been lost during his lifetime, he wouldn't like to simply set the clock back to how things were before the war. His father first got a tractor when Richard was fourteen, and even after that much of the work was still done with horses. It wasn't really until Ewan took over that the last remnants of that era were banished and the farm became fully mechanised – and dependent on chemicals. Richard is impatient with the romance surrounding horse work; he remembers it as gruelling for the men and even tougher on the horses. He is convinced that physical work is essential for people's bodily and spiritual health, but he'd draw the line at abandoning tractors completely in favour of the horse and cart. However, he thinks that there should be more people working on the land, and he has no time for people from the cities, especially the unemployed, who all want to eat but don't want to work. Berry farmers round-about have more trouble with their squads of pickers than they ever used to; folk don't know what work is any more. It's not in their blood – not even in his nephew, who did things like hoeing in the rain regardless that all the weeds would be putting their roots straight back down again. While acknowledging that there are

peasant people starving in the Third World because of drought and famine, Richard thinks that humans cannot survive if they get too far away from the soil; in the rich countries city people starve themselves with anorexia, or become obese, or else get allergies because of eating nothing but junk food.

By and large, Richard's methods of growing vegetables are much like his parents', he hasn't used many special organic techniques. At home they would always let a few weeds grow up among the carrots to help against the fly, and put down rotten onions from the previous year between the rows. Some of what Richard learnt from his father is a bit like the companion planting ideas, and he did a few of the HDRA trials when they were looking into that in the seventies. However, while Richard's father would shoot rabbits and birds without compunction if they became a nuisance, Richard himself only does so as a last resort. He relies on talking to them, not in a threatening way, but by projecting to them what he is trying to do in the garden and how they are damaging that; it's a bit like weaving a spell. He claims a fair degree of success with rabbits and rooks, but he can't make it work with mice; perhaps the environment of the tunnels is just too tempting for them, or perhaps with protected cropping he has strayed too far from natural ways of growing to have a moral authority over them. He thinks of it as being a bit like dowsing, which he was shown as a boy by one of his uncles, and which he still occasionally uses – if a neighbour wants to know where the drains are or something. The bio-dynamic people are the only ones in the organic movement who seem to recognise that sort of energy, but although he respects many individual anthroposophists he has never been able to stomach the philosophy because of the way Steiner himself is hailed as an unquestionable authority on absolutely everything. If he had come across Steiner when he was younger he might have been drawn to it, but he has long been set in his ways and is quite happy to go on tending his garden the way he always has done. Apart from the garden, and his reading, he spends an evening every now and then with old friends, and enjoys the sense of community whenever there is a ceilidh or some other sociable local event.

Henry & Pauline Gardener

Marthorpe Farm

Impeccably neat farmhouse and fields.

Wildlife area: pond with planted cowslips.

Henry's family have farmed Marthorpe, in Northamptonshire, for three generations now, and when it came up for sale in 1965 Henry's father bought it as the sitting tenant. Henry himself had already left school to work full time on the place, and he gradually came to take more responsibility until 1980, when father retired from the partnership. Henry then officially took over the farm and his wife Pauline was brought in as a partner. Father continued to work about the place however, and Henry always came to him for advice; he has been much missed since his death three years ago. There used to be several men working on the farm, but they are now down to two: Michael, who does the cows, and Ewan, the shepherd. There is an accountant who comes in to Henry's office up at the house for one day a week, and that tends to keep Henry indoors with the paperwork as well. There is also a local lad who comes in to help with the tractor work; they used to take him on for five or six months in the year but now it's less because none of the crops are sprayed.

Marthorpe is 950 acres, 500 of which are fully converted to organic. Henry has now put all of the rest into conversion because once he was convinced that the crops would grow without chemicals it seemed best to get the half-and-half stage over as quickly as possible. Also, he has recently been able to use the rotational set-aside scheme to get payments on fields that are in conversion leys. He has taken advice from Elm Farm about the conversion, and it seems that he has an advantage over many farmers in that the land was never managed very intensively; father had always stuck to a rotational system and continued to run both sheep and beef cattle. They did use nitrogen and some pesticides for many years but it was basically a traditional farm. When he was younger Henry used to chafe a bit when his friends said that they were being old-fashioned, but as he saw how other farms changed during the seventies he increasingly came to respect his father's way of doing things.

Soon after Henry took over the farm he became interested in the Soil Association. He started getting their magazine, and went to a few meetings of the local group. Henry thought that the ideas were sound but he was rather overwhelmed by the vehemence of the old ladies who dominated the meetings. He didn't actually start to convert to organic until 1986 because he felt that he was already farming in a way which looked after the soil and the wildlife, and he was worried about what would happen if he stopped using artificials completely. It took him several more years before he considered converting the

stock, as that meant doing without some vaccines and medicines which the vet seemed to think were essential.

When father retired from farming he started taking an increasing interest in the wildlife on the farm. He had long bemoaned the decline of the grey partridge which he used to shoot in his youth. It was a lovely bird but, father reckoned, just couldn't live with modern farming. If he saw them, he always made an effort to take the tractor around the nests of stone-curlews and other birds nesting in the fields; he thought of it as being only decent. But now he began to make a positive effort to encourage wildlife. He started by having a new pond dug, with islands in it, and encouraged the children to stock it with toads and newts from elsewhere. So many ponds had disappeared within his memory, and although he had kept the old one at the bottom of the farm he felt as if he was doing something to redress the damage done by neighbours who had levelled theirs long ago. He would never think of speaking out against them though – farming was having hard times and he'd made many compromises himself; he just happened to be lucky that he didn't have to push the farm as hard as some of the others who still had overdrafts to pay off. Besides , the old pond had always given him pleasure, he liked watching the ducks flying in of an evening and sometimes took a bit of grain down to cast around for them.

Father also encouraged Henry to take advantage of the grants for hedge layering, when they came in. They had gradually stopped layering the hedges, although they had never been cut right back; instead, they had grown wild and so thick that the cows made caves in them for shelter. The hedge layerings used to provide firewood and Henry's mother, when she was alive, had cooked on a big wood-fired stove. Pauline insisted on an electric cooker and central heating, so there had been less call for the wood. When they started layering the hedges again Henry put a wood-burning stove in the living room, but they've never got into the way of using it regularly. The idea was to get the hedges onto a twenty-year rotation, but in practice they rarely got more than one or two hedges done in a year. They had to have some of the ones along the roads cut right back, as they were becoming a danger on the bends, but just before they did so the local FWAG woman visited and suggested letting some of the hedge trees grow on. She tied markers on them so that the men who were cutting would know which to leave. It was nice to think that some trees would be growing up to replace the elms that used to mark the edges of the fields. Losing the elms had really changed the face of the place, and although father had done some planting it had mainly been conifers, and only in a couple of areas where the ground was too rough to plough. These new woods were nothing like the old spinney and the stretch of

trees where the river bank was steep, although those had both thinned out a lot since the fences came down. Another of father's retirement projects was to put back those fences, and within a couple of years the cowslips were flowering as he remembered them from his youth, and there was a marsh marigold down by the river.

If Henry's shift towards farming organically fitted in well with his father's interests it sat less easily with those of his wife. Pauline's parents had lived in the village when she was a girl, but she was sent away to school and her vision of farm life has always been formed more by magazines such as *Country Living* and *Horse and Hound* than by the reality of a farmhouse downwind from the neighbour's intensive pig sheds and being expected to spend nights up with the lambing. She dislikes anything that smacks of peasanthood, and the hippy connotations of organic farming are even worse. Over the years the centre of the farming operations, and the animals in particular, have moved to a set of buildings at the other side of the farm. One of the buildings about the house has been converted into stables for Pauline's horses and the rest are used for storage. The only animal apart from the horses that Pauline will have near the house is the guard dog, Rex. She had a fit recently when Henry unwisely suggested that they should have a few hens about the place so that they could have their own eggs. What was wrong with getting them from Safeways, Pauline had said, and just think of the mess. In fact they rarely argue, but it has been at the expense of an almost total division of their interests. Pauline has no involvement with the farm now, and Henry has learned to tread very warily when suggesting changes in the way she runs the household.

Pauline is proud of their children: Jessica has left home to study music in London, hoping to become a concert pianist, and Dominic is taking A-levels and has applied to do law at university. Henry sometimes thinks that they will have learned more about farming from hearing the Archers – which Pauline follows – than from him, they spend so little time out on the farm. However, Pauline has brought them up with the horses and they still sometimes join her on the local hunt, and Dominic is in on the pheasant shoot, so at least they know something about the countryside. In some ways Henry regrets that they both have ambitions far beyond the farm, because it leaves him uncertain about how it will be carried on in the future, but that's the way kids are nowadays. In any case, it was his love of music and his organ-playing for the church that got Jessica started on the piano. They've had a lot less trouble with the kids than many parents they know of. There's been the odd clash – most recently when Dominic wanted to spend sixty pounds on a pair of

jeans and Henry refused to lend him the money – and neither of the children are prepared to come to church regularly any more, but at least they put in the occasional appearance.

Pauline has a circle of women friends, mostly from the same parish, whom Henry generally has little time for. They seem to talk of nothing but horses and soft furnishings – and painting, because Pauline has become quite a well known local artist. She does watercolours, both landscapes and commissioned paintings of people's houses. That takes up much of her time, and brings in some income. She also organises the letting of the two cottages they have on the farm. She does short-term holiday lets over the summer, which means she has to co-ordinate bookings, as well as cleaning the rooms and tending the gardens before each new family arrives.

At first Henry was a bit wary about holiday lets; he wasn't keen on the idea of having people running about the farm, but it has worked out pretty well. He was concerned because they do get the odd problem with walkers: people cutting the wire of a fence thirty yards from where the footpath is because they can't read a map, that sort of thing. It's not the local people that cause trouble though, even the incomers, although he is getting more locals on the footpaths now because people are interested in the farm being organic, and also because there are more birds at Marthorpe than round about. The hunt is more disruptive than walkers, but Henry can't complain about that because Pauline joins it, and anyway they've been coming over the farm ever since he can remember. He himself has never been one for hunting, but he used to enjoy shooting. He still likes the scene, but has lost the urge to shoot birds himself so he has found himself a role in going along with his labrador and picking up the wounded birds. That way he can be part of the day and join his friends with a clear conscience. Henry still shoots vermin on the farm, although increasingly he's leaving even that to Dominic.

Ewan, the shepherd, lives in the third farm cottage with his wife and their three children. Ewan has always been fairly open to organic ideas because of his interest in the wildlife on the farm. As a boy he used to go nesting after birds' eggs in the hedges of all the local farms, and always knew where the badgers and foxes were or where to look for grass-snakes. He is still a keen bird-watcher, and years back it was he who realised that the reason the thrushes were dying was because of the slug pellets. They ploughed them in after that but it really started him worrying about farm chemicals, especially since he also began to develop an allergy to some of them: when he handled them his lips smarted and his hands got red and swollen. Without support from Ewan, and indeed father, Henry might never have started to convert the farm.

At first they only converted the arable crops but then they decided to see if it would work with the sheep. One of Pauline's tea-party friends had recommended a self-taught homoeopathic vet years ago when she had trouble with a horse. She has used him on and off ever since, and having someone like that to call on made it easier to think about using it on the sheep. Ewan had been keeping careful records of the flock – about 600 breeding ewes – and so when they began substituting homoeopathic remedies for conventional methods he could tell how effective they were. The first thing they tried was a remedy for foot-rot which went in the drinking water while the sheep were in before lambing. That worked like magic, and it was a lot less work than putting them through the footbath. Then there was a nozode for watery mouth which you drip onto the the lambs' tongues; it was not 100% effective, but no worse than what they had before. Recently they've used a probiotic with the lambs, to get their digestive systems going; Ewan is not too sure how much difference it makes, and they may do without next year because it is a significant expense. The medicine bill for the organic sheep is only about 10% of what it would be if they were fully conventional. In fact they now use homoeopathic remedies on the conventional flock, but also worm them routinely and give them a seven-in-one vaccine rather than the three-in-one that the organic ewes get. They don't flush the organic flock so much in the autumn, so the lambing percentage is a bit lower, but it means that the ewes are not so stressed, and it is certainly less work at lambing time. Henry is tempted to do the same with the conventional flock now, as the organic ones do seem healthier – in particular the sheep are calmer and fewer of them have had to be culled because of udder problems. Indeed, he would convert them all to organic completely were it not for the fact that he has in-conversion grazing to use up during the next two years.

Abortion is the thing that Ewan is really scared of; in 1983 they had an abortion storm and neither he nor Henry would want to see anything like that again. They were pulling out rotten lambs every day for a month, almost half the flock aborted and they lost a fair number of the ewes as well. There isn't a foolproof vaccine, and father had been sure that since it had been so bad it wouldn't be back again for a while, so they haven't been doing anything special for it. They've never had more than three or four a year since. When they started the homoeopathy they wondered about trying a remedy for abortion but it had to go into the water and several of the fields that the sheep were in over the winter had running water rather than a trough, so they couldn't do it. They've decided to avoid buying in any ewes in the future, in case they bring in new strains of the abortion or other diseases, but they still bring in the rams.

Worms seem to be the main problem with sheep in an organic system. Eventually they will get a proper clean grazing system worked out, but it is difficult when they only have a few fields in organic grass. Ewan always assumes that it is worms if the sheep look poorly, but when they send dung samples away they are often clean; he wants to get a microscope so that he can check them himself and immediately treat any animal that needs it. Another concern in the past was the Baticol dip, which satisfies the Ministry regulations for compulsory dipping, but doesn't do much for fly-strike. In the last couple of years they have used Vetrazine pour-on as well, and that seems to be effective.

They've only been selling organic lamb for the last couple of years, and not all the lambs have actually gone as organic since it hasn't always been easy to find a buyer just when they've got to the right size. Organic lamb mostly ends up in supermarkets and their specifications are very tight; it's easy to let the lambs go over weight. Mostly Henry has sent the lambs to a specialist organic meat wholesaler – but they have to travel a long way and Henry has never been happy about that. The conventional lambs get sold straight to the local abattoir so they aren't in the truck for more than an hour or so. However, it is not registered with the Soil Association, and even if they could slaughter the organic lambs there Henry would then have to market the meat himself in order to get a premium for it although, in any case, the premium on lamb fell from 40 to 15 pence a kilo last year. There is continual talk in organic circles about mobile abattoirs, but they have never actually materialised, and doing it that way would still leave Henry with the problem of marketing. He is a farmer, not a businessman, and dreads the thought of having to make deals with supermarkets. He will have to face up to selling their first cattle later in the year and he doesn't expect it to be any easier; there are only a few that are organic so they will be ready in ones and twos. The cereals are easy in comparison, there are people falling over each other to buy them, all he has to do is phone up to find out what they are offering, and recently he's been sticking to one trader anyway because the bloke is decent and they pay up promptly.

Half of the calves that were born this year are supposed to be organic, as well as the few from the year before. It means feeding the cows differently from the time they conceive, quite apart from not being allowed to give the calves their vaccinations. Michael is frustrated at not being able to look after them properly, the way he was taught, and Henry finds it hard to be convincing when talking to Michael about the cattle, since he himself never had a college training and has learnt all he knows about the beasts from his father and the man before Michael. He can't guarantee that the homoeopathy will work,

despite the success with some of the remedies on the sheep, and indeed the horses. Michael finds the whole organic thing pretty incomprehensible. When he first came to Marthorpe five years ago Henry was harvesting his first crop of organic wheat, and although it all seemed a bit odd he didn't think it would have to concern him much as his main responsibility was the cattle. He finds the teasing of his mates in the pub hard to bear; they ask him if he is using green baler twine yet and why he isn't wearing his sandals. Although at first he could say that it was nothing to do with him he has now been drawn into it because of Henry's intention to do organic beef.

It was because Michael was so worried that his beasts would drop dead without vaccines that they only put a dozen of the cows onto the organic regime at first. Through the winter, while they were in calf, they were fed organic silage, and the organic straw which they had been getting anyway. Michael was impressed with the straw; in fact he reckoned it fed better for having a few weeds in it. They do the silage in big bales, despite Henry's reservations about using plastic, and they have started to experiment with various mixtures, like rye with vetches. The 'organic' cattle also got a few homegrown organic oats and barley with extra protein from bought-in soya. The soya wasn't organic, but the Soil Association allows 20% of the feed to be non-organic, although they specified that soya should be full-fat and extracted without the use of solvents. Henry is hoping to use home-grown beans in the future; he feels that it would be very satisfying to be able to feed the stock entirely from the farm, quite apart from them being organic. For Michael, on the other hand, it hurts to be using organic oats as feed when he knows the price it would have fetched if it had been sold for milling. Moreover, it looks as if they won't be able to get the organic premium on all of their first batch of stores because it turns out that there isn't an organic market for bull beef. They had problems getting conformation right with steers, and had switched mainly to bull beef in the previous couple of years. The bulls were more difficult to handle than steers but seemed to put on weight a lot faster. They sold alright on the conventional market but apparently no-one wanted organic bull beef, or at least the supermarkets weren't taking it and nearly all organic meat went that way.

Michael thinks that it is utterly pointless to be giving the beasts all this expensive feed, playing around with homoeopathy (or 'holy water', as he calls it), using derris rather than the ordinary stuff for lice and so on – and then not even getting paid more for them in the end. He has a friend who is a manager on a neighbouring farm who is continually encouraging him to rebel against Henry and force him to agree to keep the cattle out of the

organic 'circus'. As his friend points out, if Michael threatened to leave at short notice, particularly over the winter when the cattle were housed, he might be able to force Henry's hand. They are very tightly staffed, it would be difficult to get a new man quickly, and Henry would be hard pushed to manage without him even for a short time. It hasn't quite come to that, but Michael isn't at all happy about being expected to keep the cattle healthy without using the veterinary products that he has been taught to do it with. The local vet doesn't think that it is right thing for the animals either.

Although he hasn't brought himself to point it out to Henry, because he doesn't want it thought that his only objection to organic is his own self-interest, Michael is also worried that he will do badly out of converting the cattle. At present he is paid a bonus for every beast that they sell but this has always been per head, rather than being related to the market price. Ultimately, the organic system will mean cutting down the stocking rate, which will in turn mean fewer bonuses even though Henry himself might sometimes be getting an organic premium.

Overall Henry reckons that they will be slightly better off financially when the whole farm is converted, but it depends mainly on there still being a premium for the grain – although anything could happen with the various grants and subsidies. Last year they sold about £70,000 worth of grain, mainly wheat, and some oats. The income per acre was substantially higher than the conventional fields, and the cost of inputs was much lower. In the past couple of years they have had a drought in the summer, and the organic wheat seemed to withstand it better than the conventional, which is an advantage that he hadn't anticipated. However, the organic rotations have more grass years than the conventional ones, so he won't be able to grow wheat so often, and since he will have to reduce the stocking rate he won't necessarily have more animals to sell, despite the larger acreages of grass. With the organic system, it seems that the gross income doesn't change much, but expenditure can be decreased. At least he hopes that is how it will work out in the long term. It's all still a bit tense at the moment and he probably wouldn't be risking the conversion at all if he had rent to pay or a big overdraft. Feeding the stock on home-grown grains certainly cuts down on the money going out, but Michael is probably correct when he says that it would make economic sense to sell all the oats for milling and then buy in feed. However, there is a feeling of rightness about doing it this way; it seems closer to the biblical idea of stewardship, rather than making every decision like a businessman.

Being organic also makes him rather more independent of the system of grants and subsidies; it is rewarding to be producing crops that are actually in demand, rather than contributing to grain mountains. He also feels more independent of the chemical companies. It was always difficult dealing with reps who were pushing all sorts of things that they claimed were essential, and never having the technical knowledge to contradict them. At least if things go wrong now it is his own responsibility, and in the meantime he isn't spending huge amounts of money on things which may be unnecessary or ineffective. There are still some inputs of course, but they are less mysterious than much of what he used to put on. He is mainly using basic slag for phosphate, rock potash, and lime. Although mining even those minerals is doubtless disruptive, at least he can feel that he isn't contributing to pollution on the Rhine by buying the complex agrochemicals produced by factories there. Henry would like to start using sewage sludge, because he feels that it is an essential part of an organic system: if food is being sold off the farm, human sewage should be brought in to replace the minerals. He is currently trying to get an analysis of the sewage from a nearby plant to see if he can get it approved by the Soil Association; it is from an industrial area, unfortunately, and the heavy metal content may be high. Henry has also tried to find out a bit about bio-dynamic preparations, but no-one seems to be able to explain to him how they actually work, and most of what he has read has been about gardening rather than farming.

Converting to organic hasn't really been going backwards, although he is using some ideas that father used to talk about from years ago – like grazing off winter cereals in the spring to get the grain to root well, and to give the sheep a bite. Henry relies on many modern machines, and he is grateful for them. He has no desire to go back to the age of threshing machines let alone horse-power, although he does worry about what will happen when the oil runs out. His animals are modern improved breeds and are undoubtedly more efficient at converting feed into meat than the old ones were. He has been experimenting with the cereal varieties, because it seems that modern strains have been designed to crop heavily with high nitrogen inputs, and he may be better off with older varieties that have more disease resistance instead. Henry is very confused by the prospect of genetically engineered varieties becoming available. The prospect of a strain to suit every situation is undoubtedly attractive, but he is very aware that the whole thing is being controlled by the same chemical companies that he has been glad to see the back of. On past showing, they are likely to ensure that any development benefits themselves before anyone else.

Pests haven't been much of a problem on the organic crops so far, although Henry has been looking into ways of encouraging predators just in case. He was considering putting in a strip of wild flowers along some of the headlands, but then a few other organic farmers came round one day, on a farm walk organised by the local Soil Association group, and one of them said that he'd had such poor germination that he didn't think it was worth the expense. The main thing Henry is trying to teach himself with the arable is not to get upset by a few weeds in a crop. With chemical farming it is so often taken as a sign of a bad or negligent farmer to have any weeds in a crop that he finds that he keeps having to remind himself that, in moderation at least, they don't affect the yield. Wild oats are the one thing that he still gets upset by, and he will spend days roguing them rather than let them seed. They used to be a major problem on the farm, but they have been easier to control since father decided never to buy in straw in case it carried seeds with it and, more recently, since Henry bought a combine and then avoided using contractors' machines for the same reason.

If there is a particularly weedy crop, Henry has the wheat cleaned before selling it, and puts sheep in after harvest to clean up the field. He has had some success with using his own seed in recent years, and again, if he intends to save seed he has it cleaned after harvest rather than worrying about the number of weeds in the field. He did one crop of organic field beans recently, and when the wheat which followed them came up full of volunteers he just let them be, harvested them together and then cleaned out the beans for feed. Several people thought that he had intentionally mixed that field; he had to admit that it was an accident, but it was a very good yield overall; the nitrogen from the beans probably helped the wheat along.

Henry quite likes adopting this sort of adaptable attitude to the crops; it accords with his make-do-and-mend approach to machinery and equipment. He hates spending money to replace something if it can be repaired. Pauline sees it as stinginess, and although she admits that it probably stood his father in good stead when times were hard she can't bear for things to look old and patched-up. She always used to complain about Henry being old-fashioned that way, and has been disturbed to find that argument undermined by some of the ideas that Henry seems to have adopted along with the organic farming. He now says that mending things makes sense ecologically – that to keep a machine going is like recycling only better – and he even uses this argument to justify his love of the old Mercedes which inhabits one of the vacated farm buildings at the house. He recently spent £2,000 on major bodywork repairs, to Pauline's despair. She's not generally that

bothered about green ideas, but in this instance she thinks her VW Polo is more ecologically sound because it takes unleaded petrol and does a high mpg.

Pauline was also scathing about Henry's enthusiasm for low-energy lightbulbs. He has put them in to all barns and lambing pens, but Pauline refused to have them in the house. She said that they didn't give enough light, they took ages to warm up, and that they either wouldn't fit or would look stupid in most of her modern light fittings. Although Henry had previously failed to persuade her to do so, she tried out various green washing powders when her friends started talking about them, but pretty soon she went back to her old brand anyway. In many ways Henry and Pauline get on extremely well, and they are regarded as a happy couple by their friends and neighbours, but increasingly there have been strains because of Henry's new ideas and Pauline's resistance to them. She doesn't mind the farm being organic and in some ways it is quite a talking point, but she doesn't want to have to change her way of life because of it and yet she is constantly feeling pressure to do so. As a family they have moved towards a healthier diet over the years: cutting down on saturated fats and sugar, eating more fresh vegetables and avoiding E-numbers. Pauline buys semi-skimmed milk and sunflower margarine, brown bread and yogurt. She knows that Henry would like them to eat organic food, but she resists buying it because it is ridiculously expensive and because she doesn't want to be seen as an organic freak. Henry is not prepared to push Pauline about her shopping but he is resolved to at least get some of their own organic lambs for the freezer.

It is true, however, that Henry's attitudes have changed as a result of his organic involvement. He used to feel responsible for the farm, and to a certain extent the wildlife on it, and of course for his family and the local community. Over the past few years he has come to take a rather wider view, and in particular to feel that if being organic is the right thing for his farm, then perhaps it is for others also, and that he should speak out about it rather more. He hates pride, and finds it very hard even to hint to his farming friends that they might not be doing the best for their land by farming conventionally, but he has begun to talk about the conversion more than he used to; just letting people know that it can work. It's a bit easier now that organic things are more in the news as well, even if not all the stories are positive.

Despite his reluctance to confront his farming friends, Henry has gradually become caught up with the idea of getting a sustainable system going on his own patch, to prove that it can be done. He thinks that it is inevitable that farming will move towards using fewer chemicals and that it will make it easier for people to change if they can see a fully

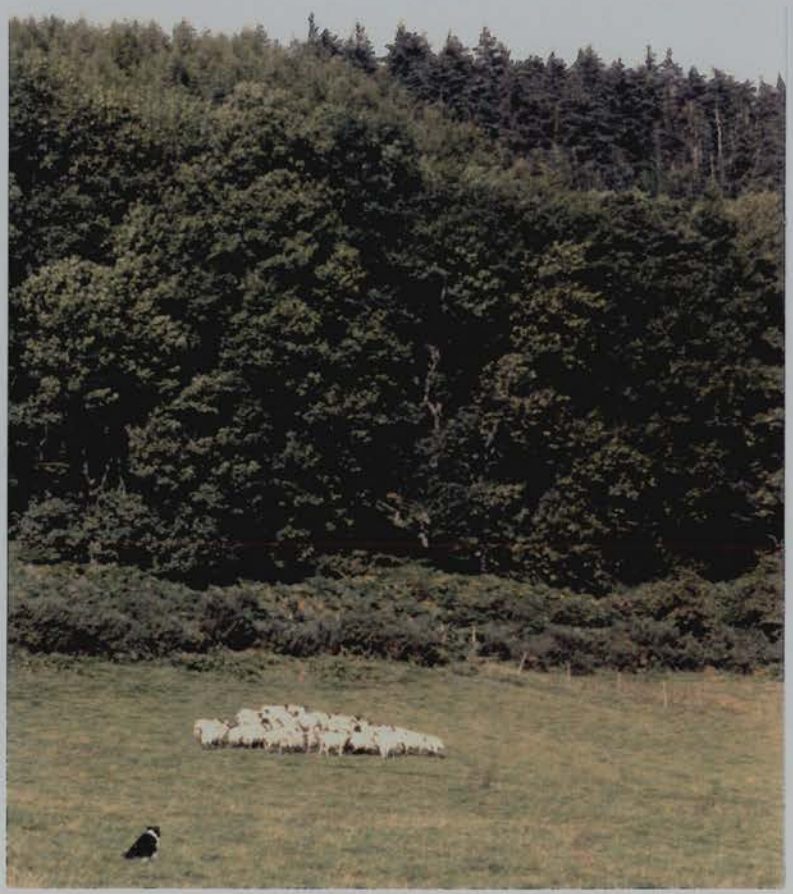
organic system working. Unfortunately, that line of thinking suggests that he should be experimenting with even more radical ideas as he can see that organic farming as it is now practised probably isn't going far enough. Eventually people are going to have to find ways of farming that are less energy intensive, but he rather hopes to be able to avoid getting involved in pioneering that.

More immediately, when he starts thinking about farming in terms of sustainability it inevitably leads him to question their lifestyle and ask himself whether their level of consumption can be considered sustainable – or indeed whether it is just, given that there are at present people starving elsewhere in the world. However, he is aware that Pauline, despite her Christian faith, is not to be persuaded by such arguments – and indeed he is not sure to what lengths he could take it himself. So Henry is left with the contradictions of running central heating when the farm produces wood, and using weedkiller on the drive at Pauline's request after having got rid of the last of the farm chemicals. He feels that his father would approve of the way that the organic thing is working out though. They both used to think that the wildlife was incompatible with the farming – so father made sanctuaries in the corners and edges of the farm. Increasingly, with the organic system, Henry finds that the sort of wildlife that father enjoyed can live within the farmed areas. Silage is still a problem in that the tractors destroy the eggs of ground-nesting birds, but the grain crops are generally left undisturbed until harvest – they don't have tramlines in the fields any more – and the hedges have more wild flowers and insects now that they are not being sprayed. Henry is looking forward to some of his fields coming into their second phase of organic arable, by which time he hopes they will have regained their full fertility, so that he can see how the crops grow when the land is established as organic.

Caroline & Chris Bateman

Lower Kidderfell

Shed converted into a house; note solar panels and wind generator.



Old woodland; sheepdog gathering sheep.

Caroline and Chris bought the derelict house at Kidderfell, along with eighty acres of land, ten years ago now. Until then they had both worked in a university, and Chris continued to teach in the Geography department – spending four nights a week during term-time with a colleague and driving back to the farm in Cumbria for weekends. The idea of buying their own piece of land sprang from their involvement with the Green Party. Caroline's subject was botany, and although her research was never directly related to agriculture she used her scientific background to speak on behalf of the Green Party – both about the way farming tended to destroy botanically rich habitats, and the short-sighted attitude that chemical farmers seemed to have towards soil structure. The retorts from farmers tended to be along the lines that it was all very well for her to talk about environmentally sound ways of farming in an ideal world, but that it wasn't economic. She hoped that by taking on a farm themselves they could set an example, or at least be able argue that they did have a practical involvement in agriculture. In fact, their local Green Party dissolved amid internal bickering before the Batemans bought the farm, and for years afterwards they were too busy to have time for much politicking.

The Green Party had been only one of their spare time commitments, however; they were both active members of CND, Caroline was also involved in animal welfare issues – without being a vegetarian – and Chris was a committed reader of the *Ecologist* and the *New Internationalist*. Chris managed to combine his interest in the issues covered by these magazines with his work, by starting a new course on the ecological and social effects of development projects in the Third World. He gradually carved himself a niche in the department as a specialist in the area, and as a result he found his job fulfilling despite the more traditional courses that he was also required to teach. Caroline, however, was working as part of a team on a research project which had no connection with her outside interests, and she was frustrated at this division of her life. When the project ended she decided that rather than try to find another academic post, she wanted to buy some land so that they could try out some of the ideas which they had been propounding. She also had the feeling that caring for a particular bit of land, and creating a sort of oasis for plants and wildlife, would ultimately be more useful than anything else.

Another starting point was John Seymour. They had both read some of his books and were undoubtedly influenced by his vision of a self-sufficient happy family, but they were

uncomfortable with the narrowness of his vision. Self-sufficiency only seemed to work as a social system if everyone lived like that; otherwise you still needed big farms to provide for those living in the cities. Caroline wanted to produce food for sale, like other farmers, but to do it in a sustainable manner. Seymour was encouraging because of his 'try and see' approach. Neither Caroline or Chris had any practical experience of farming, and Seymour made things seem less daunting to them – particularly animal husbandry although, as they discovered, this was often because he was over-simplifying.

In some ways owning land was more important than what they could do with it. They wanted to buy a substantial acreage with some established woodland, and since their money was limited they found themselves looking at farms which had little arable and on which livestock would be the main enterprise. Most of Kidderfell is poor land, with only a couple of fields which can be ploughed, but it was cheap because of that and because there was no house, only a ruin with outline planning permission. Chris was keen on the idea of building a house and he began to research about insulation and solar heating even before the sale went through. They sold their house in town, took a mortgage on the strength of Chris's income, and then cashed in their pension plan to have money for building. Kidderfell was beautiful and remote, with a river running through it and thirty-five acres of old woodland; it was a bit close to Sellafield, but they had felt that they should not try to evade the reality of living in a nuclear country by choosing to live at a distance from the power stations.

That autumn Caroline bought a mobile home, some ewes, and hay to feed them over the winter, and poultry – geese, ducks and chickens – and then she took in a donkey that someone locally didn't want any more. The farm began to feel populated, and she was committed to being there. She read up a lot about sheep and cattle, and went on an Agricultural Training Board course about lambing so that she would have some confidence with it in the spring. Her main project that autumn and the early part of the next year was planting trees, all native hardwoods: oak, ash, beech, rowan, chestnut, aspen, alder and willow. The old woodland had previously been grazed, and when Chris came out at weekends they worked at fencing it off, as well some new areas which they planned to plant. They set the mobile home up with a woodstove, and a Calor gas cooker, and bought a generator which could be used for lighting, although they relied on lamps and candles and only turned on the generator for the bandsaw or the washing machine. They had decided not to spend money on getting connected to the mains because in the long run Chris

wanted to have a windmill for generating electricity; they did however get a telephone line put in right at the start.

Chris drew up plans for the house that autumn, but it was two years before they moved in, and even then they had to use a ladder to get to the upstairs. Much of the money they had earmarked for building the house had already gone on stocking the farm (they now had a single-suckler herd as well as the sheep), buying a Landrover and an ancient tractor, and renovating an old barn for lambing. The cost of getting contractors to do building work was frightening and so they tried to do everything they could themselves. They employed a local carpenter, Dob, who came at weekends when Chris was there so that the three of them could work together; Caroline did bits and pieces during the week as well. They didn't get much done during the winter and even during the rest of the year some weekends were taken up by lambing or dipping the sheep, moving cattle or haymaking. When Caroline finally moved into the house its only advantage over the mobile home was the fact that it had a plumbed in toilet; it lacked any internal walls and years later it still looked more like a workshop than a home. Dob and his girlfriend Hazel took up residence in the mobile home and agreed to each put in one day's work a week in lieu of rent.

Hazel was also keen on the idea of growing vegetables to sell locally, as she had previously worked on an organic market garden. Caroline worked out a sort of share-cropping arrangement with her, by which Hazel used an area of the best land in exchange for 10% percent of the sales. Hazel was eligible for the Enterprise Allowance, and she used that to keep herself going for the first year. It was an uphill struggle to get the garden going, even though they chose the best land on the farm for it, but at least the outgoings were minimal. The first year Hazel tried a wide range of crops to see which things would grow; she kept them all in vegetables well into the spring, and sold the surplus to a local greengrocer. In the following year she cut down her range and grew only those crops which had flourished, and applied to get the Soil Association symbol so that she could sell them as organic. She hadn't been sure that it would be worth her while to have the symbol, because she had to pay over a hundred pounds just to be inspected and she didn't anticipate selling more than about £1,500 worth of vegetables in a year – and most of that was likely to be to the greengrocer, who wasn't interested in them being organic anyway. However, the symbol would mean that she could sell to the wholefood shop in town as well; they had said they would take vegetables if she became registered, and they were the only other obvious outlet in the area.

Meanwhile Dob was still doing carpentry jobs when he could get the work, and had taught himself green-wood turning: he made chairs and stools, each with an individual character, from branches cut from the old coppiced trees in the wood. As a result the mobile home was beautifully furnished but he never really found an outlet for selling them, although some were bought by friends or the occasional visitor to the farm. Dob and Hazel were used to living on the dole or else minimal wages, so they weren't troubled by earning so little: especially as they weren't having to pay for rent and were growing a lot of their own food.

When the man from the Soil Association came to inspect the garden Caroline asked him about the rest of the farm. She had been running it as more or less organic since they arrived – in that she had been determined from the start not to use artificial fertilizers. She had spread lime on some of the fields, but otherwise they had just had the muck from the animals. Indeed, she was pretty sure that most of the farm had never had NPK or anything put on as it was just rough grazing land with patches of gorse and bracken. The inspector agreed that the land would probably qualify for the symbol without needing a conversion period, but pointed out that before the animals could be sold as organic she would need to use the right kind of sheep dip, cut out wormers and most vaccines, and buy in organic feed. Caroline had been aware of the restrictions on the use of veterinary treatments, but until now she had been primarily concerned to learn how to look after the stock properly, and had felt safer using standard methods – although she had tried homoeopathy for things like joint ill where there wasn't a conventional remedy. Her antipathy to chemical agriculture had focussed mainly on effects on the soil and the natural environment, and she felt that medicines given to animals were unlikely to have such wide-ranging effects as fertilizers or pesticides. Ironically, the only sheep dip allowed by the organic standards was Baticol – presumably because it was less likely to persist in the meat of the sheep – but it was reputed to be more harmful to fish than even the standard dips. She was still trying to find an alternative to the standard practice of tipping out the used sheep dip, or at best spraying it on grassland. Caroline didn't have much patience for the sort of people who got worked up about eating chemically grown vegetables or meat from lambs which had been dipped; she thought that they were likely to get more ill from being neurotic than they possibly could have done from what they ate. So she was a bit uncomfortable about the way that the animal husbandry part of the standards seemed to be more concerned with food purity than environmentally sound farming. However, she decided to apply for the symbol, in order to make a statement about their intention to farm in a sustainable way, and also in the hope that they would

get a premium on the lamb. She had previously wondered about trying to sell the beef as free-range but the local abattoir claimed that all the cattle they dealt with were free-range, so they hadn't been interested.

In fact, Caroline's farming was not visibly different; Kidderfell was surrounded by marginal sheep farms rather than the monocropped wheat plains of East Anglia and Lincolnshire which had been the prime target of her campaigning against intensive agriculture. The main thing which distinguished Kidderfell from other farms was the amount of tree planting that she had done. It annoyed Caroline intensely when neighbouring farmers dismissed Kidderfell as a hobby farm, and said that she was lucky to be able to afford to plant trees. Although it was true that the farm was not making a profit and they were living off Chris's salary, she had got grant money for the tree planting which any of their neighbours could also apply for; and she regarded tree-planting as repaying a debt – restoring an exploited landscape – rather than a scenic luxury. In any case, Dob was putting his mind to ways in which the trees could be made to pay in the long term; they were already coppicing for fuel wood, but he intended to learn how to make charcoal, and hurdles out of split chestnut, as well as his green-wood turning. Mostly the local farmers didn't take much notice when she put up a sign with the Soil Association symbol on it, because they reckoned that the whole area was near enough organic anyway, but the farmer next door would never say the word "organic", instead he always referred to it with a sideways smile as the "the O-word". The thing which did make Caroline unpopular locally was that she had forbidden a local shoot access across Kidderfell. She had been aware that it would not be well received, but she had no patience for men with guns shooting as if they were playing space invaders.

Despite both the garden area and the farm land getting the organic symbol Caroline wasn't able to sell any of the lamb as organic in the following year. There was a bad outbreak of pasteurella among the lambs in September, and although most of them survived they were skinny little things and never put on much weight. She sold them for about £4 apiece in the end, but only after they had eaten quantities of hay and special maize. She was terribly worried that her stockmanship was at fault, but several other farms nearby also suffered, and the vet said that it was probably brought on by the lambs breathing dust, because it had been an unusually dry summer.

The following year was wetter, and the animals were healthy, but building up an organic market for the meat was hard. They held back a couple of the bullocks and several of the sheep after slaughter, rather than selling them to the abattoir, and had them butchered

and frozen. Chris then took the meat to a freezer in the house where he stayed during the week, as Kidderfell still had no electricity except from the generator, and therefore no fridge let alone a freezer. He sold the meat to his colleagues in the university, and to a few people who had heard by word of mouth. Later Chris managed to get a delicatessen-type shop interested as well. They realised, though, that having managed to cope with reducing medication, buying organic feed, and organising a clean grazing system, it was marketing the meat that was likely to be their most difficult problem. There was not much of a local market, because there was an abundance of hill lamb and no big towns nearby, and while Chris's sales were going well at present, it was likely that EC regulations would catch up with them eventually, especially as they were selling to the shop. All the butchering was done professionally, so that wasn't a problem, but then Chris just put the meat in the back of the car in picnic boxes, and chilled transport was soon to become mandatory. It was also hard to know what to charge people. In the first year Caroline phoned up a co-op dealing in organic meat to ask them what their prices were, although she didn't want to sell to them because they insisted on using a Soil Association approved abattoir and there wasn't one anywhere nearby.

Caroline worked out that they would probably get a better price marketing the lamb under a quality assurance scheme rather than selling as organic, but she was becoming more convinced of the value of the organic movement in providing a high profile example of how farming could be done sustainably, so she was determined to continue with the symbol. She managed to sell some of that year's calves to another organic farm, as stores. She got a premium price for them, and the satisfaction of knowing that they would eventually be sold into the organic market; it additionally took some pressure off the winter keep. She had put the ploughable fields into a four year rotation: swedes and kale for fodder, then arable silage, undersown with a red clover, rye grass and chicory ley which stayed down for two years. She used electric fencing so that the fodder crops could be grazed in sections, and when she brought the cattle in for the worst of the winter they were fed on hay, the silage, and some bought-in organic oats. She wanted to feed oats because that is what could be grown in the area, and so it seemed appropriate, although the nearest organic source was actually miles away. None of the feed was conventional, although the straw the beasts were bedded on was and they ate quite a bit of that, but the organic standards allowed a certain percentage of non-organic feed anyway.

The Batemans had hoped that the farm would make enough profit to enable them to buy up more land, but it was still only just breaking even, and Caroline wanted to expand the

stock and to start rearing up working horses to sell to a trainer. She would have a bit more time than she had during the previous two years because they had decided to drop the garden as a commercial venture at the end of the season. It had become rather a joint project, with Caroline putting a lot of work into it, but now Hazel was pregnant and planned to live off family income supplement and have time for the baby. She was still going to grow enough veg for them to eat though. Hazel was also a bit disillusioned because no sooner had she discovered how much easier it was to grow from modules than she heard that they were to be prohibited unless they were from an organic source, and there seemed little chance of getting organic ones locally. Caroline was also relaxing a bit about work on the house; it was still not finished, even after six years, but there was less urgency about the remaining work. All in all, Caroline felt that it was time to expand the farm, especially as she now felt confident about animal husbandry. The National Trust owned a lot of land nearby, and Caroline arranged to rent a fifty acre piece a few miles away.

With the additional area Caroline looked forward to being able to keep some rare breeds of sheep, to see how they compared with the local Herdwicks and Swaledales. She already had various rare breeds among the poultry and she found that some breeds were better able to forage for themselves or were better mothers; they were all less prolific egg-layers than the F1 hybrids that she had bought initially but their hardiness made up for that, and it felt better not to rely on intensive rearing systems for buying in the birds. She sold free-range eggs through the summer, but without artificial light the hens simply stopped laying in the winter and they had to do without eggs even for themselves. As yet she could not bring herself to feed them organically; although she hated supporting the conventional system people locally would not pay extra for organic eggs, and she would not have made any money out of them if she had bought organic feed. She did get additive-free pellets for a while, but the hens virtually died over the winter when there was little forage and they were relying on the pellets alone. The feed company admitted, although not in writing, that without the additives the feed was probably not a sufficient diet. After that she bought whole grains for them with fish and soya meal for extra protein.

Meanwhile Chris decided to go part-time at the university, as the department had to shed some staff anyway and he wanted to spend more time at Kidderfell. He and Dob finally began rebuilding the second-hand wind generator which they had bought years ago, started work on a conservatory to provide some passive solar heating for the house, and installed a composting toilet in the mobile home to replace the outdoor privy. Chris

also had plans for a reed-bed sewage system which would purify waste water from the house more effectively than the septic tank. Reading about reed-bed systems, which he had first heard about in casual conversation at a Farmers' World Network conference, led Chris on to permaculture. At first he was only interested in the ideas for alternative technologies that the permaculture books suggested, particularly as the agricultural side seemed to rely on semi-tropical species, but then he went on a ten-day permaculture designer's course and came back with all sorts of new ideas. He planted the area that had previously been vegetables as a 'forest garden': twenty or thirty different sorts of tree, some wild and some cultivated but mostly fruit or nut bearing, all mixed up with currant bushes, gooseberries, raspberries, rhubarb, and a myriad of perennial and root vegetables. He mulched the whole area with woodchips made from coppice waste with a machine which he bought for the purpose. After the first year it looked like a jungle, but he claimed that it would eventually produce as much food as the vegetable garden had, and without the need to dig, weed, or re-sow every year. Whenever visitors came he would proudly show them round and expound the ideas of Robert Hart, Bill Mollison, and Fukuoka.

Now that Chris was at home more of the time they increasingly began to think about the environmental impact of the way they lived, as well as how they ran the farm. Caroline had previously got by with the minimum of modern conveniences, partly as a sort of gesture of solidarity with the two-thirds of the world who didn't have a choice about such things, and partly because there always seemed to be more important things to do than fitting an effective gas cooker to supplement the Rayburn or sorting out a reliable way of lighting the house. The only appliance which she really relied on was the washing machine, which ran off the generator. However they didn't run the generator very often so Caroline got used to reading by candlelight and cooking with a pot-holing torch on her head; she had a supply of batteries which she recharged at a friend's house down the valley at the same time as doing the car batteries for the electric fence. Chris now took the line that reducing their own consumption by itself would have little effect on the world – he hoped to have more influence by developing technologies, like wind and solar power, which were environmentally friendly. However, their financial situation still dictated doing without many things: since they bought the farm there had not been any question of going on holiday abroad, or spending much on clothes or entertainment. Chris's alternative technologies seemed to be prohibitively expensive in the short term, even though he and Dob did all the work themselves.

Caroline gradually became much more committed to being organic rather than just farming in a way which she felt was ecologically sound. Even although she didn't agree with all of the details of the standards, particularly the livestock ones, she felt that farmers who wanted to challenge the agrochemical machine could do so much more effectively by being part of a positive, organic, association than simply saying that the conventional methods were wrong and then each going their own way. She was also depressed that some of the nature conservation bodies were as prejudiced against what she considered sustainable methods of farming as they had been ten years ago when she had been campaigning with the Green Party. They still thought that since organic agriculture took slightly more land to grow the same quantity of food that there would be less space for wildlife. Once again, she started writing letters and articles, pointing out that wildlife didn't restrict itself to nature reserves, and that organic farming methods were more likely than conventional ones to encourage wildlife on the farm itself, and, of course, that intensification of agriculture had led to deserts of set-aside, rather than an increase in nature reserve 'islands'. She began to subscribe to *Mother Jones*, an American magazine, because she wanted to get an impression of what was happening there at a grass-roots level, and she started reading the British organic magazines carefully. She was also using her training in botany to research the literature about biotechnology in plants, and she wrote a couple of articles about the potential hazards.

With Chris only part-time at the university their income was almost halved, but Caroline began working as an inspector for the Soil Association. She had the necessary scientific background, and now had farming experience too, but she had to learn quite a lot about horticulture before she felt able to inspect growers as well as farmers, not that there were many market gardens in the area. There were, however, an increasing number of farmers, and at last there was an organically approved abattoir within range, which meant that nearly all their meat could now go through organic routes, although the premium was a lot lower than it had been – only about £2.50 on a lamb. Chris's meat sales dropped, however, because of the recession; he still had some regular customers but many of the people who had only bought occasionally stopped completely. It was an obvious economy for people who had been getting organic beef just for special occasions like barbecues.

Chris's response to the problems of marketing the meat was to come up with various permaculture ideas for the stock. He reckoned that there wasn't much they could do about the sale price as they weren't in a position to start adding value by processing, so the thing

to do was to cut down on the work. He had been reading about foggage – a grazing system which could feed animals all through the year without having to cut grass for hay or silage. They began trying to get some of their fields onto a foggage system by re-seeding them with a herb-rich ley (ryegrass with cocksfoot, timothy, fescue, clover, chicory, sheep's parsley, kidney vetch, and yarrow). The plan was to get year-round grazing by resting the fields for considerable periods: from mid-August for grazing in November and December; from the end of August for grazing in January and February. They were worried about the herbs failing to persist in the leys, and it was difficult to mesh the foggage grazing pattern with taking animals off the land to break the life-cycle of internal parasites, but they felt it was worth giving it a good try.

Then Chris started thinking about the chickens and began to plant an area with trees and shrubs which he hoped would provide forage for them: Scots pine, alder, ash, beech, blackthorn, broom, bird cherry, elder, hawthorn, rowan, sycamore – more or less any tree with fruiting bodies that he could buy as a sapling, grow from seed or plant as a cutting. He planted vegetables for them too: jerusalem artichokes, potatoes, beans and peas, and cabbage – after all they ate what they could from the garden whenever they got out so why not grow the same crops to feed them rather than buying in grain? He also copied an idea from a permaculture book and made a wire 'hammock' outside the hatch into the hen-house. The hens could walk over the wire to get in and out, but a fox would be deterred as it couldn't balance on the wires. Theoretically they would be saved the work of shutting up the hens every night and letting them out in the morning. Caroline was dubious about this, because she thought that most of the hens they had lost over the years had not been taken by foxes, but by stoats, which were considerably more agile than foxes, so they soon reverted to shutting the hens up every night. Caroline had reservations about permaculture; particularly about the extensive use of non-native species and the idea of people setting themselves up as professional designers.

When Dob and Hazel decided to move back to the village, because the mobile home was too small to cope with the activities of a toddler, Chris took over the remaining vegetable garden and started doing all sorts of different raised beds and mulching systems. Some of his crops were fairly productive, but he was mainly interested in experimenting with new ideas rather than growing large quantities. One of his other ideas was to plant trees in the midst of clumps of gorse so that they wouldn't have to be fenced. As a result of learning about permaculture both Chris and Caroline began to view natural systems in quite a different light from how they had been trained to. They wanted to talk through

these new ideas with other people, so they began to encourage visits from anyone who was interested in permaculture. Now that they could put people up in the old mobile home it was easier to have visitors and they also joined the WWOOF scheme and had a whole string of volunteers. Previously Caroline had been a bit wary of the WWOOF idea because she hated the countryside being seen as a playground for people from the city, and she had thought they would get people coming for a quick holiday rather than out of genuine interest. However, she really enjoyed having new people about and it was good to have the extra help.

Both Caroline, and to a lesser extent Chris, are still fundamentally pessimistic about the way the world is going; they don't think that Western society has got its priorities right and fear that its excesses will soon make the planet uninhabitable. However, they feel positive about being able to care for a small area of land in a way that feels sustainable, and even reconstructive – the saplings that Caroline planted when they first came are now substantial trees and they have buzzards nesting in the old woodland. The permaculture thing is also exciting; it feels pioneering, because permaculture itself is young, and many of the ideas have never been tried out in temperate climates before.

Jan Arnold

Rowantree Centre

Bio-dynamic garden and orchard; garden seat to encourage appreciation.

Farm shop: framed Soil Association license, celery in organic packaging.

Rowantree Centre is a big old mansion house in Sussex which had been used as a hospital before it was bought by a group of alternative therapists ten years ago. It has twenty-five acres of land, fifteen of which are taken up with woodland, the grounds around the house and pasture areas. There is a large Victorian walled garden in which vegetables are grown, and the remaining land is run as an organic smallholding, with a rotation producing a few field vegetable crops and forage for the animals. Growing their own food was one of the aims of the original group, but their main intention was to live communally and to use the reception rooms of the house to run courses. The emphasis was social and therapeutic rather than agricultural, although over the years there has been a growing element in the course programme on diet as a route to health. The garden and smallholding have therefore become important as demonstrations in addition to providing food for both residents and visitors.

At present Rowantree organise evening classes and non-residential weekends in dance, massage, yoga and aerobics. Outside organisations also hire the centre to run a wide range of residential courses. Of Rowantree's eight founding members, only one still lives there, although another couple have bought a cottage close by and still teach some courses. There are fifteen adult residents at present, and about twelve children – the number varies as some children spend time with mothers or fathers who live elsewhere. Many of the adults now work outside Rowantree, which has led to a reorganisation of the original communal structure. The main conflict had been that people, especially those with young children, wanted their own living space and kitchens. Outside work had also become problematic because the members of the commune couldn't agree on how to integrate people's outside earnings into the system of sharing out income from courses according to the needs of individuals. At present the income of those with outside jobs varies considerably: among the lowest paid are the therapists and a couple of people who work locally in the social services, others make substantial incomes from computer work.

Currently there is a core group of seven people who organise the course programme, run the garden and smallholding, and are responsible for the upkeep and routine maintenance of the house. When core group members lead courses the income goes to the core group rather than to the individual, but other residents rent the space and set their own charges on the same basis as outside teachers. Some members of the core group are allocated specific responsibilities, but generally work is still done on the basis that people will notice what

needs doing and do it, rather than only taking responsibility for their own particular area. Workloads vary according to people's ability and energy levels, but they are all paid equally – out of income from the courses and, in the last couple of years, from the sale of vegetables grown in the garden. The income of members of the core group is rather less than social security but they have the advantage of not paying for heat and light. Like all residents, they also have free access to the vegetables, fruit, milk and eggs which are produced although meat is paid for.

The members of Rowantree have always tried to find a balance between the needs of the individual and of the group, and this has resulted in financial arrangements which are baffling to outsiders. The prime example is the way that residents who are not part of the core group contribute towards electricity, maintenance costs and the outstanding loan on the house. There is a set rate per adult, and mothers and fathers are also individually responsible for contributing a quarter-share of the rate on behalf of each of their children. Parents who are part of the core group do not have to contribute for themselves or their children as the core retains the original income-sharing principle. This can mean that while one parent contributes a quarter-share on behalf of a child the other parent is exempt due to being part of the core group, or indeed because they are not resident at Rowantree at all.

Such arrangements are also an attempt to moderate the influence of the outside world, where people are paid in a way which reflects the values of society rather than the effort of the individual. Rowantree is attempting to compensate for injustices in wider society, rather than merely working around them. For example, it is appropriate that some children have only one quarter-share paid for them, because they spend half their time with an outside parent. In one instance where an outside father paid maintenance the mother used it to provide a second quarter fee for the child, but if an outside parent abdicates responsibility the residents as a group absorb the missing fee rather than expecting an extra contribution from the resident parent.

There used to be an almost equally complicated system for charging people who came on the courses: a sliding scale linked to income and commitments; creche payments required from parents and childless people alike; and sponsorship rates which contributed towards the cost of another person participating. Now, there is simply a full fee and a concessionary 15% discount. Their earlier sliding scale left Rowantree open to exploitation, not so much from people who lied about their income, but from those who chose not to earn and were then in effect being supported by Rowantree without being part

of it. There was also a feeling at Rowantree that people valued courses more when they had made a commitment by paying the full fee.

Jan Arnold joined Rowantree four years ago, when her daughter, Holly, was just two. She had previously been a librarian, and had for many years balanced this indoor work by having an allotment and doing occasional WWOOFs. She began with the allotment after getting involved with a local anthroposophical study group, and gardening became her way of experiencing Steiner's philosophy in practice. From the start she used bio-dynamic methods of growing rather than simply organic, and she continued this at Rowantree.

Jan originally came to Rowantree in response to their advertisement for someone to work in the garden. She had wanted to do more gardening work, and to be somewhere near a Steiner school for Holly. Rowantree answered both of these needs although she was not attracted by the notion of communal living. In fact, by the time she joined, the residents had already split into separate living groups and she was able to move into what was in effect a flat within the main house. Running the garden, however, brings her into regular contact with all the other residents as they come to pick vegetables and to help with the work. She also has to co-operate with Jasper, who runs the smallholding, over machinery, tools, manure, and the crops on the arable land outside the walled garden. Jasper lived for several years at the Findhorn community in Scotland before moving down to Rowantree, and he is an active member of Rowantree's core group. Jan sits in on the core group meetings at which the course programme is organised, but she rarely makes any input to that side of things.

Jasper has overall responsibility for the animals but, as with the garden, most residents help with the work, especially the milking. This is organised through sign-up rotas rather than less flexible weekly ones. There are two Jersey cows whose milk is made into yogurt and both soft and hard cheeses. The cream is generally eaten fresh or incorporated into the yogurt rather than made into butter, as churning is a very labour-intensive process and, in any case, they would not be able to produce as much as they consume. Sometimes people make their own butter on a small scale. The milk from the four goats is either drunk or made into yogurt. Jasper rears up the calves for meat, so the Jerseys are crossed with beef breeds by artificial insemination. The calves are bucket reared and then kept on grass and the forage crops. The young goat kids are separated from their mothers at night so the nannies can be milked in the morning. When they are older the kids are taken away entirely and kept either for meat or, if they are nannies, for sale or as replacements. There are also several flocks of hens in extensive pens, a few Jacob sheep, geese, and usually a

pig. The course catering is vegetarian so all the meat is eaten by residents. Meat is the only product of Rowantree that residents actually pay for; the money goes into the central house fund. They came to this arrangement because, although only one resident is wholly vegetarian, the amount of meat that people eat varies considerably and its outside monetary value is high.

The animals are very much seen as common property and, for several years before Jan came, the garden had been even more communal than the smallholding. Prior to that, one of the original members of Rowantree had effectively been in charge – having reclaimed it from the hospital's lawn and nettles. The communal system involved a map on which people marked out the areas they wanted to use each year and the crops they intended to grow. There was no planned rotation, and some vegetables were neglected altogether if no-one was interested in growing them, while on the other hand there were always too many strawberries because everyone planted them just in case. One year they produced so much kohl-rabi that they had to feed it to the goats and it kept them going all winter. Although individuals took responsibility for cultivating their own patch, people harvested produce from anywhere in the garden, both for the communal kitchen and for the separate living groups. The system could be seen as inefficient – some crops were never harvested or were carefully stored and then forgotten, and since there was no specialisation, different people made the same mistakes year after year. This was justified on the grounds that people's individual experience of growing vegetables was more important than co-ordinating or maximising production. Most of the residents had liked the system because of the opportunities it had given them to experiment and learn things the hard way, and they had appreciated the complementary pleasures of producing food for others and eating vegetables grown with love and care by someone else. However, when three of the people who had been doing much of the work took on other commitments, they decided to look for someone to take overall responsibility for the garden. They had also hoped that having a co-ordinator would enable the garden to provide more food for the courses, so that they could cut down on costs, particularly in the 'hungry gap' of the spring months.

With this history of co-operative involvement in the garden, Jan inevitably found that her authority was less than complete. She indulged her passion for planning and organising by using the core group's computer to do elaborate maps of rotations and cropping plans, and she set up a bio-dynamic rotation for the walled garden. The garden obviously needed a planned rotation, and there were no objections to her setting up a bio-

dynamic one based on the division of plants into heavy feeders, light feeders and legumes, rather than a more usual organic rotation. However, the timing of the actual work did cause some difficulties, because she wanted to go by the bio-dynamic planting calendar, which gives the dates for sowing and transplanting different sorts of plant according to the phase of the moon and the position of the stars. This didn't always coincide with the times that other residents were able to work in the garden.

Rowantree had always been more or less organic in its treatment of all its land, but no-one had previously attempted to use bio-dynamic methods, and the ideas were incomprehensible to many of the residents. Jan found it hard to explain to people who had no interest in the principles of anthroposophy why cabbages should be planted on a different day from carrots, and why, if something wasn't done at the right time, it was better to wait until the next appropriate period on the planting calendar rather than do it as soon as possible afterwards. Because she had started gardening as a result of her interest in anthroposophy she had never felt the need to question the basis of bio-dynamic methods, and it threatened her beliefs to have people asking for specific justifications of the way she did things – especially since she was often working more or less with a book in one hand.

Jan gradually made contact with bio-dynamic growers in the area, and began to meet with them to make the bio-dynamic preparations, and at other festive occasions. This gave her a sense of solidarity, and she enjoyed learning about how to make the preparations from scratch as she had previously only bought them in ready-made portions. More recently Holly has started at the Steiner kindergarten and through that Jan has made other friends in the anthroposophical network.

Along with setting up a rotation, one of the first things Jan did was to designate an area for making compost. Rowantree had always had problems with compost, partly because waste was often put on the nearest heap or whichever seemed to have most space. Jan organised a place for all the kitchen waste that didn't go to the pigs or the chickens, and a place for garden rubbish, and then she built the compost heaps herself, doing it properly in layers and using the collected material, poultry droppings and lime. She also took over from Jasper in looking after the heaps of cow and goat manure, so that she could apply the bio-dynamic preparations and keep the heaps at the right moisture, as she did with the garden compost. With both compost and manure she inserted the preparations 502 to 506 into separate holes made deep into the heaps, and sprinkled them with 507, the liquid valerian preparation. Jasper could accept these preparations as simply compost

activators, but he, and some of the others, were more perplexed by the amount of effort Jan put into stirring minute quantities of specially prepared cow dung and powdered quartz in barrels of water to make the preparations 500 and 501 – which she then sprayed on soil or plants. Jan insisted, to people who helped with this, that the liquids should be stirred for a full hour, and that the vortex in the liquid should be properly formed each time before the direction of stirring was reversed. Her explanations tended to refer to the influence of ethereal and astral elements, but no-one denied that she got good results.

Jan had felt from the start that it was important to make the garden a welcoming sort of place, and some of her decisions about where to put particular crops were made on aesthetic grounds rather than practical ones. She organised a series of WWOOF weekends to get volunteers to dismantle the old greenhouse, as it was an eyesore and beyond repair. Then she moved the raspberry canes from the middle of the garden and replanted them along the end wall where the greenhouse had been. She also started some companion planting, and this brought flowers and blossoming herbs into the garden which made it more attractive, as well as stimulating the growth of the vegetables and encouraging bees. People at Rowantree appreciated her efforts to make the garden more ordered and beautiful, as well as being impressed by the range of crops it produced; and increasingly her way of doing things was accepted even by those who were doubtful about the philosophy behind it.

Some of the local people who came to evening classes at Rowantree began to ask if they could buy vegetables, and rather than waste time harvesting things for each person individually Jan set up a sort of help-yourself shop in one of the garden sheds. She finds it difficult to decide on prices and sometimes makes a special trip to town to check conventional prices. Often Jan's prices reflect the availability of particular fruits or vegetables and she also often goes for round figures as otherwise buyers, who have to weigh out the vegetables and calculate the cost themselves, often have problems with their sums. There is an old pair of scales with an arm which shows the price per pound for most things, but many people don't understand how to use them. There is no passing trade for the shop, as Rowantree is far from a main road, but nevertheless Jan now sells a steady trickle of vegetables to visitors, and to people who have heard about it by word of mouth. Her thirty-five pence salad bags have been particularly popular: mixtures like lolla rosa lettuce, pak choi, land cress, rocket, salad burnett and radishes. Despite the modest turnover the produce in the shop is always fresh because it is used by the house if it doesn't sell quickly.

Jan thinks that it is very important that people eat their vegetables fresh, as the life force starts to diminish from the moment they are picked. Eventually she would like to start her own investigation into the life force of vegetables, using sensitive crystallisation and chromatography to compare the quality of vegetables grown in different ways, and the effect of winter storage on root crops. She is convinced that eating fresh bio-dynamic food is the most important thing that anyone can do to improve their general state of health. Most of the food that she prepares for herself and Holly is bio-dynamic, and the rest is at least organic, even though it sometimes means paying two or three times the price, for things like nuts and dried fruit for example. Generally, if something isn't organic she will do without rather than resort to the conventional equivalent, although she tries not to be too fanatical. She's careful about particular things, like marmalade, because she thinks that the calculations made for allowances of conventional pesticides are made on the basis of people not eating the skin. So she buys organic oranges for making marmalade even though she wouldn't object to eating the occasional conventional orange. Before she came to Rowantree she found it difficult to get unpasteurised milk, and she had worried about giving Holly milk that, according to anthroposophical literature, has its B and C vitamins destroyed, some of the whey proteins denatured, and is likely to trigger allergic reactions. With the cows and goats at Rowantree there is a plentiful supply of raw milk, from animals which are fed, at least in part, organically. Jasper does buy in some conventional concentrate feed for them, but the fodder kale and mangolds are produced without chemical inputs.

Recently Jan suggested getting Rowantree registered as an organic holding, because of impending EC legislation which would mean they would not be able to claim the vegetables they were selling through the shop were organic unless the place was registered as part of a symbol scheme. She and Jasper arranged to have the garden and the smallholding inspected by the Soil Association, so that they could sell field crops and vegetables under the Soil Association symbol. They did not include the animals as Jasper felt that they couldn't conform to all the standards and because, since all the milk and meat were used by the house, they weren't selling them in any case. Jan would have preferred to go for a bio-dynamic symbol but that would have meant excluding the smallholding, or else registering it separately as simply organic and then paying more for belonging to the two different schemes. As it was not clear how much of a financial benefit is was actually going to be, Jan compromised and settled for having the whole place inspected by the Soil Association. The conversion period was waived, as they were able to prove to the inspector's satisfaction that no prohibited chemicals had been used on the

land in the previous two years. They were approved for the symbol subject only to Jasper keeping more comprehensive records for the smallholding.

Gradually, Jan has been drawn into the shared aspects of life at Rowantree; she joins in with the weekly circle-dance group, and in the winter she meets with some of the other women to make carpets and rugs from the Jacob fleeces. However, she sometimes feels the need to get out of the self-contained atmosphere of the place, and twice recently she has taken Holly off on holiday to France for a couple of weeks; to an organic family farm which advertised in the WWOOF news. She no longer feels that she is deserting the garden by taking a break, although she wouldn't leave it in peak season. She's managed to get it onto an even keel, and sometimes delegates garden tasks just so that she can work at other things – like doing the core group accounts, which she has begun to take on. The shop remains marginal in that is is quite a lot of extra work for a minimal income, but it has become an important local resource, and for that reason Jan has agreed with the rest of the core group that it should be kept going.

John & Louise Gibson

Oldham Home Farm

Organic cereals in foreground, conventional beyond – note tramlines.

Organic beef cattle housed over the winter.

John and Louise have been at Oldham Home Farm, in Wiltshire, for the past eight years. John previously worked as a farm manager near Hereford for twelve years, having gone there straight from agricultural college, but he had always wanted to return to Wiltshire. The family farm is just ten miles down the road from Oldham, and it was passed on to John's older brother when their father died. John inherited some money at the same time, and this was enough to buy the Oldham farm house along with 150 acres of its land. The rest of the farm was sold off in separate blocks, and most of the land that John now farms is rented: he has the tenancy of Brookern, a 460 acre farm, one of several in the next parish which are owned by a local landowner, and he also rents a couple of fields of church land close by. At Brookern he runs a herd of 200 dairy cows with about 75 followers; dairy farming was a new thing for him, but he took on the existing herd when he got the tenancy. It was a very difficult time to start because milk quotas were just being introduced. He had to reduce the size of the herd almost immediately and initially increased the arable to compensate, but later took advantage of the set-aside scheme instead. The remaining arable is now in wheat, with the odd field of oilseed rape and this last year, linseed. But most of the farm is grass, for grazing and conservation, and forage crops. The Oldham farm is all arable and is in wheat and set-aside, with a single organic field on a rotational system.

It's been quite a struggle to keep the farm going, and recently they haven't been able to keep up with the interest payments on the overdraft that they initially took out to pay for the herd and for new machinery. They have Oldham as security on the loan, but even so the bank is beginning to put pressure on them. Louise works six afternoons a week as a doctor's receptionist in addition to doing farmhouse B&B, and without both of those extra sources of income they would not be able to manage. Louise doesn't have much interest in the farm, and she has enough work with her job, the housework, B&B and getting the meals on the table for the men. She does their dinner before she goes in to work and they have their tea as soon as she gets back – cold meats and cheese then pudding and cakes – all things that she can prepare beforehand.

The boys have helped a lot with the farm work up until now but they are both about to leave home; Gerry to do an agricultural degree and Ben to join the army. John will not be able to employ anyone extra when they go; he'll just have to work longer hours himself or start cutting corners. He already has one man, as well as a live-in agricultural student on a

yearly basis, but they are both kept busy with the dairy side and problems are likely to come when there is a rush on getting the silage in or ploughing. John relies on contractors a fair bit anyway, which means that things don't always get done at the best time, but there doesn't seem to be much option; it's hard enough to find money for wages each week as it is.

Recently they've been making a bit of extra cash by letting lorry drivers park up overnight in the yard at Brookern. It's easy money; all John has to do is clear up the chip papers and take a couple of quid off each of them in the morning when he's up there for the milking. He also has school-children coming round to see the milking every now and then, and he charges them a pound a head, but it means taking the time to talk to them and explain how the machines work. It is more for the sake of the kids than to bring in money as it tends to send the whole morning's routine off-kilter if he's tied up with a group like that.

The 'organics' thing, as John calls it, was supposed to be a way of diversifying. He was attracted by the premium paid for organic wheat and it seemed like a good way of making use of slurry. John joined OF&G five years ago and set out to convert a forty acre field at Oldham. It was one of his poorer fields, because he didn't want to take too much of a risk, although he reckons now that it might have been better to choose an area which didn't have such a burden of weeds. He did spray it thoroughly to begin with, and then took off a crop of barley grown without any further chemicals so that he could start counting the two-year conversion period from the time of planting. The barley was not a great success, and it almost put him off the organic idea altogether, but as some of his set-aside was rotational anyway he used that for a year to get through the conversion time, and then planted an organic wheat crop.

The yield in that first year was just over two tonnes to the acre, which was more satisfactory than the barley had been, presumably due to all the slurry which he had applied in the meantime – mainly just before and after the set-aside period. The wheat fetched nearly £200 a tonne but John became impatient at being tied in to selling to OF&G and decided to join the Soil Association so that in future he would be free take the highest price he could find. He was also worried that there might be a scandal about organic food and he thought that if that happened he might be better off with the Soil Association since it was known to be stricter. They did indeed turn out to be terribly picky, and insisted among other things that he grow a different variety of wheat on the organic area than on the rest of the farm. So in the following year he planted Maris Widgeon rather than his usual Mercia, and undersowed it with an Italian ryegrass and red clover ley for a one-year

break before the next lot of wheat. It is now in its ley year, and John took off a hay crop earlier in the season. He had hoped to be able to sell hay at an organic premium, but most of it is still sitting in the barn since he hasn't yet found a buyer close enough: the cost of transporting it over long distances quickly becomes ridiculous. The ley is being grazed by some store cattle that he kept on specially; it is the first time he's had any stock at Oldham and he had to use electric fencing and put down a pipe from the mains at the house for water. It took the best part of an afternoon messing about with a borrowed truck to get them there as well.

After next year's wheat crop he intends to sow oats, or perhaps try field beans to sell as organic feed, and he will then put it all down to a ley for several years. The Soil Association suggested that he should start converting another area now, so that it would be producing organic crops when the present field was in its long ley, but John is not sufficiently convinced that organics makes sense economically. The organic wheat prices in his second year of growing were down by 25% and there had been more competition from weeds in the crop as well. He did try going through with a spring tine harrow to pull out weeds, after reading about the Tearaway weeder which is designed to do that job; it helped a bit but he doubted it was worth the time it took and it did nothing for the perennials. He had intended to spray herbicide again, before the field went into the long-term ley. It would then be at least two years before the next harvest, so it seemed like that would be the same as the initial conversion period. OF&G would have allowed him to do that, but he didn't realise until after joining the Soil Association that they wanted land to stay organic all the time once it was converted.

The Soil Association were also asking him to plant hedges or leave wide headlands to provide a boundary between the organic area and his conventionally farmed land. John could see the point along one side of the field, because he had no control over what his neighbour might be spraying, and another side already had an old hedge, but he tried to argue that where the boundary was with his own fields he could avoid losing productive areas to headlands by undertaking not to spray the conventional crops right to the edge. Although they accepted that at first it came up again as a problem when he was next inspected. The Soil Association liked the fact that he had dug a pond though. It had been Louise's idea; she had heard that you could get a grant for most of the work, and it kept the conservationists happy. It was doing their bit for the environment, but John also deliberately sited it in the organic area in the hope that it would harbour predators, although he wasn't too sure that it wasn't in fact breeding nasties as well. They have also

planted a few trees on their own land – they made a shelter belt near the house when they first came – but John isn't one to waste time or money on planting up someone else's land so he hasn't done any of that sort of thing at Brookern.

One year the Soil Association got worried that his grain might be contaminated with diesel fumes, because he had a direct fired system for drying the grain; the next year they were concerned that the slurry he was putting on the fields wasn't aerated. John felt he was getting an awful lot of hassle just for one field of wheat, and when they brought up things which he didn't think were important he tried to sit tight and make vague promises in the hope that they would forget about it. Even when they tried to help it didn't seem to work out: when John was on the phone to them one day someone suggested that he should try growing potatoes so that he had more of a rotation, and said that it was possible to get a special quota for them if they were organic. He put a lot of time into applying for that, but it wasn't nearly as easy as he had been told and in the end he had to give up on the idea. John's impression of the Soil Association is that they make up a lot of the rules as they go along and that the left hand never knows what the right hand is doing.

Another problem with the Soil Association is the paperwork – they keep sending complicated forms to fill in – and then there's the whole business of cereal transaction notes. Anyone buying organic grain from a Soil Association symbol holder has to apply for a note from the Soil Association, and fill in the quantity purchased. They then send it back to the Soil Association to be stamped and the office there keep a total of how much grain each producer has sold, while returning the transaction note to the purchaser. John himself doesn't have to fill in forms about this, but last year the Soil Association noticed when they added up the quantities recorded on the transaction notes that the total tonnage of wheat he had sold as organic added up to more than he could have grown according to the estimate of yield per acre that he had previously given them. He had a hard time convincing them afterwards that he had managed to get two and a half tonnes per acre.

The student who is on placement with them at the moment, Morris, is very keen on organics, and he has a contact with someone who wants some borage grown organically to be used for making a medicine. John is interested in the idea of growing an acre or so next year, as the returns sound very good indeed, but before he commits himself he has charged Morris with finding out how to grow and harvest the stuff. Morris has also been suggesting that John should try cutting some of the wheat with a binder and selling the straw for

thatch; apparently thatchers think that organic straw lasts longer because it hasn't had so much nitrogen, and Maris Widgeon is one of the right varieties. John, however, reckons that even if Gerry came back for the summer he wouldn't be able to spare time during the harvest to muck about with a binder. He does like to try to keep up with new ideas though and a couple of years ago he was out at midnight with his tractor lights turned off, trying this night ploughing business to see if he could sow a crop without waking up the weed seeds. It didn't make any difference at all, and he felt a bit of a fool until a few months later when he was down the pub and it came out that after it had been on the radio quite a few local farmers had tried it without letting on. They had a bit of a laugh about it then, and wondered whether the whole thing had been a set-up by the RAF so they could try out their radar. After that John began to wonder how many of them, like him, had a finger in the organic thing and were keeping it quiet.

John is reluctant to convert more land just for the sake of a premium on organic wheat, but he is keeping a watchful eye on the development of the market for organic milk products. He feels that he needs to start some sort of extra enterprise on the farm in order to keep things going in the long term. A yogurt or cheese making business is one possibility, and if he could do it organically that would give him a marketing edge. The more likely option is to develop the idea of farm visits: rebuild the milking parlour so that people can watch without getting in the way and have a children's farm, a picnic area and a farm shop as well. Both schemes would require some capital, but the children's farm would be likely to bring in returns sooner than anything which required land to go through a two-year conversion period. He hasn't yet committed himself to either plan, partly because he is aware that the government might finally come up with some sort of grant or support for conversion to organic, and that might tip the balance.

In the meantime John has been finding out what organic dairying would actually involve. An organic milk producers' group started recently, and he went to a farm walk which they organised. He is very worried about the prospect of having to do without some of the conventional veterinary treatments which he takes for granted. He has known homoeopathy to work, and he accepts the principle that reducing stocking rates is likely to make the animals less stressed and thus less susceptible to disease. Preventing disease sounds all very well, but you have to know about an awful lot of different diseases and how to avoid them, instead of just letting the vet vaccinate the animals. Overall, he is rather daunted by the amount of knowledge that seems to be required of a stockman to run a herd organically. You are allowed to use conventional treatments if it is needed for the

welfare of the animal, but you then can't sell the milk as organic for several times the manufacturer's recommended withdrawal period.

The two main problems which John anticipates are parasitic worms and not being able to use dry cow therapy for mastitis. The only way of dealing with mastitis is by frequent stripping and cold water treatments, and worms have to be avoided by using a clean grazing system – which would mean running a flock of sheep to alternate with the cattle. He is also worried that he would not be able to get a good crop of silage without the use of nitrates. John thinks that some of the details of the livestock standards are a complete nonsense: all the concern about the permissible percentage of non-organic feed when you can use as much non-organic bedding straw as you like although they eat that too, and the confusion about whether non-organic allowances should be calculated on a daily basis or by the year. However, he would be prepared to go along with the rules if it made sense economically. At present he thinks that it is too much of a risk to do more than the occasional crop of wheat, but if the market for milk products develops and government grants or subsidies for organic production become available, organic milk production might be a more attractive choice. In the meantime he'll see what sort of price he gets for his organic wheat next year.

Martin & Lily Horsefield

Paley's Orchard

Volunteer workers in market garden.

Serve-yourself 'farm shop' and delivery van.

Paley's Orchard is an oddly-shaped patch of ten acres on the edge of a village in Devon. The house is still not quite finished, although Martin and Lily began rebuilding it when they moved to Paley's twelve years ago. It's a rambling sort of place, and big enough to accommodate the continual stream of friends, visitors and WWOOFers, although the long-term volunteers usually live in the caravans at the top of the old orchard or else in the converted chicken shed at the back of the house. Gillian, however, has become a sort of adopted daughter to them and has used one of the upstairs rooms in the house for the past three years. She works in the garden six mornings a week for her keep, and spends the afternoons drawing illustrations for children's books (which she loves doing) and graphic design (which is rather more profitable). Their own son, Luke, who came with them to Devon from Kenya at the age of eighteen, now lives on his own in the next village and makes his living mainly as a joiner. He also hires out his van for local removals, and runs an organic vegetable stall in the market in town once a week which, along with the farm shop, provides the main outlet for the produce from Paley's Orchard.

There is one paid full-time employee, Alex. He came to them ten years ago, aged sixteen although claiming to be older. He had spent much of his life in various special schools and with foster parents. The headmaster of his last school had phoned up asking if they'd be able to take Alex for a year on a training scheme; the only recommendation that he could give him was that the boy was determined to work on a farm. The school had already contacted twenty or so farms and failed to find him a place. Martin and Lily agreed to give him a chance, and he had stayed ever since, although he didn't live at Paley's and was very silent about his life beyond it. He was with a girlfriend now, and she was soon to have a child, but he had never introduced her to them. At first he had been terribly slow at working but he didn't cause any trouble, and they needed as much help as they could get in the early years so they kept him on. Then he was part-time for a while, as they couldn't afford to pay him after the training scheme ran out, but he gradually got quicker at the work and took an increasing interest in how the crops were grown. As more volunteers and helpers began to arrive, Alex took on the role of the old hand, supervising them and teaching them. They employed him full time for one summer, and then continued like that through the autumn and into the next year because Martin had strained his back and couldn't do any of the heavy work.

Another old-timer is Patsy. She has lived in the village all her life and remembers the orchard from when old Paley was still living there, before he died and the house was left empty. She's a widow and her children have left home; she comes up one or two mornings a week to work in the garden for the sake of the company and a bag of vegetables. She also cooks lunch every now and then to give Lily a break. Everyone working in the garden comes in at lunchtime for soup, bread and cheese, and usually a pudding of some sort. It's a good time for talking, and they always take an hour or more off at lunchtime, as well as a break at elevenses. The afternoons are quieter, because it's often only Martin, Lily, Alex and perhaps a WWOOFer or a visitor working then; the regular volunteers and Gillian only work mornings unless there's something that particularly needs to be finished.

There are usually four or five volunteers in the caravans over the summer, and sometimes one or two in the winter, although they then tend to stay in the house because the caravans are not very weather-proof. They've only rarely had to advertise for volunteers. People who have come to work for a weekend as WWOOFers sometimes fall in love with the place and stay; there's been a succession of foreign agricultural or horticultural students, from Africa, and more recently from Eastern Europe; Luke was involved with a Buddhist group for a while and several people from it later came for a season.

The character of the whole place can change a lot depending on the volunteers that come. Once they had a group that stayed for several years. It was alright at first but after a while they began to treat it as if it was their own home, and they wanted to have more of a say in how the place was run. Martin and Lily had always made all the decisions themselves, and had never pretended that things were otherwise. These volunteers were more used to working as part of collectives or co-op groups, and they began to claim that they were being exploited when it became clear that the Horsefields were not going to change their way of doing things. Lily was very upset by that, especially as they were signing on the dole, and given that they got accommodation and vegetables in exchange for their mornings of work she felt that they weren't doing at all badly. Since then she's tried to make it clear that people aren't expected to stay for more than a year, with the exception of Gillian of course.

WWOOFers and other occasional volunteers are generally keen to work, if not always very skilled, but there are sometimes problems about diet. Lily has never been prepared to make many concessions for vegetarians, and although they are welcome to cook up whatever they like in the kitchen some of them have found it difficult to cope with chickens being plucked in the sink and with the days when the Horsefields butcher pigs

and lambs for the freezer. It always seems to be the people who are most attracted to the live farm animals who are unable to face up to the inevitable conclusion of animal husbandry. Both Martin and Lily have grown tired of hearing the arguments against killing animals. They respond by pointing out that stock they keep are not occupying land at the expense of vegetable production – the pigs are housed and fed mainly on waste from the garden, while the geese graze under the trees in the old orchard. Recently they've had a few vegans passing through, and Martin has taken on a mission to moderate such extreme views – at the same time taking a rather malicious pleasure in shocking people by being less than discreet when killing poultry.

Despite the occasional difficulties, both Lily and Martin thrive on having lots of visitors around, partly because their house in Kenya had always been full of people. One of their worries about coming back to England was the fear that they'd end up living alone together in a bungalow with nothing to do. Martin originally went out to Kenya as an engineer, although he became increasing involved in agricultural projects while they were there. Lily worked as a teacher as well as running the household. She had always loved gardening: her parents used to have a big vegetable garden as well as her mother's precious flowerbeds and borders. The garden in Africa was mainly ornamental, although it did have various fruit trees, and all the time they were abroad Lily missed tending familiar vegetable crops. They decided to come back to England while they still had the health and energy to start a market garden.

They lived in a couple of caravans for their first year at Paley's Orchard, until the roof of the house was done. They had that much done professionally, and then moved in and rebuilt the rest around themselves. In the end it was Luke who did most of the work as his parents threw themselves into getting the garden going. Initially they'd intended to divide up the long room on the ground floor, but they got so used to cooking, eating and living in one space that it never happened. There are a few idiosyncrasies as a result: Luke plumbed in the bath without putting up a dividing wall, so it is still there in the corner, with boards and cushions over it so it can be used as a settee when no-one is bathing; and the dogs and cats have free run of the area – the oldest cat generally has her kittens in a kitchen cupboard among the sacks of oats and flour. They had been determined to have a conservatory; in Kenya much of their time had been spent on the veranda rather than inside the house, and they wanted to recreate that atmosphere. The conservatory was one of the first parts of the house to be completed and leads off the main room, but it has been rather taken over by a vine and several young fig trees, in addition to being used for

ripening tomatoes and bringing on young plants in the spring. There is room there for a few seats despite the clutter and it's a favourite place for people to curl up alone and read, but the social centre of the house is firmly in the main room. In the winter the conservatory doors are kept closed because of draughts and the old Rayburn in the kitchen becomes the main attraction. Luke got hold of the Rayburn second-hand; indeed, he furnished most of the house from auctions and bought tools and equipment from farm sales.

When they first started working the land they had no tools at all, and the hand tools they bought new were not only expensive but also weak. Luke and Martin bid for an old tractor at a sale in their first summer, and after considerable repair work it proved capable of breaking up the soil and harrowing, although they paid a neighbour to plough the turf the first time round with his more powerful machine. The Fergie is still going strong, and has the advantage that its engine is relatively simple and accessible, so that even when it does break down they are generally able to repair it themselves. They also now have a fifty percent stake in a larger tractor, shared with a neighbour a couple of miles up the road who has a few acres of pick-your-own fruit. His enterprise is not organic, but like most of the locals he accepted long ago that the Horsefields were setting out to do things differently. Martin gets the feeling that their farming neighbours have only been able to accept them and their organic techniques because Paley's is such a small concern, and because they are only growing vegetables. If they had bought a farm rather than just a few acres, farmers would see the organic ideas as more of a threat. As it is, Martin and Lily are regarded as eccentrics who don't need to make a living out of it because they get a pension, and even their ever-changing crowd of volunteers are generally tolerated as part of the local scene.

In fact, they are now producing a remarkable quantity of vegetables and fruit from the six acres or so that they cultivate. Lily concentrates on the outside areas, and Martin has responsibility for the tunnels, with help from Alex as Martin's back still limits what kind of work he can do. At first they made polytunnels by putting plastic over home-made wooden arch supports, and they did have some success with this, but the plastic sheets wore through rather quickly as they rubbed on the wood. In the last few years they've spent money on getting strong frames to begin with, rather than having the hassle of continually having to repair and make do, to say nothing of lying awake worrying every time there's a storm at night. There are now fifteen polytunnels, of varying ages and durability, and the newer ones are fitted with irrigation systems. Something over half an acre of the garden is given over to the tunnels, and the ground between them is sown with a

ley mixture designed to encourage predatory insects. Martin aims to get three crops a year out of most of the tunnels, which requires a lot of careful planning and the occasional use of paraffin heaters in the early spring if there's a danger of frost. His main crops are early tomatoes, cherry tomatoes, peppers, aubergines, early courgettes, cucumbers, mini cucumbers, runner beans, fennel, celery, land cress and a wide assortment of lettuces and oriental greens. Recently, the worst problem with the tunnels has been rodents; he's been using traps, but may soon have to resort to bait because they are still doing a lot of damage.

They try to grow a full range of vegetables to sell in the farm shop – Lily has more than fifty varieties of outdoor crops. They are all moved around the garden each year, and although it's not a very strict rotation things rarely come back to the same ground within four years. For a few years they tried out a no-dig system, and although they haven't maintained that completely the top part of the garden is fairly free of perennial weeds now, and so they leave the soil undisturbed except when digging in green manure. Lily is increasingly using black plastic as a mulch, particularly for things like leeks and overwintered onions which are in the ground for a long time, and courgettes because they are difficult to weed. She swears by cloches to bring things on early; Luke bought up a whole lot at a sale once and they make just a couple of week's difference to many of the vegetables. She doesn't protect all of any one crop with the cloches, but just enough to start selling that bit sooner. They've also started using horticultural fleece for the carrots and parsley, to keep the carrot fly away. It can work well, but it is expensive and has to be used carefully – Lily always goes round after volunteers have been picking to make sure they've weighed the edges of the fleece down properly.

There is also a perennial patch, for globe artichokes, asparagus, strawberries, raspberries, blackcurrants, redcurrants, gooseberries, and a jungle of rhubarb near the hedge. The orchard produces unpredictable yields of old-fashioned apple varieties, and a few pears as well. They pick the best of these to store for use over the winter, sell all they can, and make gallons of juice and apple sauce for the freezer. Martin has a herb garden, but it is up by the house and they don't often sell the herbs. There are a few quinces along the back wall of the house, a peach tree which occasionally fruits, and a few other oddments which are generally used by the household. They also gather a significant amount of wild food like mushrooms, blackberries and elderberries.

Gillian looks after the poultry; feeding the hens and, at night, shutting in both them and the geese. The hens are always hungry but never seem to lay many eggs, or if they do they keep them well hidden and then appear with a brood of chicks which gradually die off or

get killed. The geese, on the other hand, are pretty good at looking after themselves and by December each year there are enough of them for regular customers and people in the village to have goose for their Christmas dinner. Technically, they sell them unprepared, to avoid the environmental health regulations, but in fact most leave the place neatly plucked and gutted. Gillian also does the pigs now. They've never kept a breeding sow, but just buy in three or four young pigs each year to fatten up. Recently they've been going to a rare breed farm to buy Tamworths, which have a lot more character and also taste better than the anonymous white ones they used to get. They take the pigs to the abattoir to be slaughtered but do the cutting up themselves and then take the oddments to the butcher in town who makes sausages for them. The whole lot goes in the freezers and at some point they generally swop some of it for lamb with the friend who shares the tractor, as he keeps a few sheep. They've never registered with the Soil Association for the animals, as it's always been on such a small scale and the feed they buy in is not organic in any case. They try to avoid using veterinary medications on the animals; the last problem with the pigs was sunstroke and Gillian dealt with that by hosing the pigs down to cool them and then putting vinegar all over their skins – a cure she'd read in some ancient farming book.

The muck from the pigs and the poultry houses goes into the compost heaps, along with household waste and a lot of green stuff from the garden. There is a neat row of long heaps, which, over the years, have become Alex's pride and joy. Most of the compost he makes ends up in the tunnels; the outside areas get well rotted muck from a riding stable, and Lily also plants green manures of vetches whenever she has a gap in her cropping. Trips to get muck from the stables became quite a chore with the old tractor, which could only pull a small trailer; the new big tractor allows it to be done much more efficiently, and it has worked out really well sharing the cost of the tractor as they only need to use it occasionally. Their other main inputs are hoof, horn and blood meal, and peat for propagation. They have been trying out various alternatives to peat, because the Soil Association is becoming more restrictive about its use for environmental reasons. As yet they haven't found a satisfactory solution; either they'll have to pay more or else start making their own worm compost or something – and there's quite enough work without that. Martin thought of trying to rot down linseed stalks from the next farm as the base of a propagating compost but they haven't actually tried it yet. Another expense is the water for irrigation which is costing them about £600 a year now. They're trying to think of ways of storing rain water, perhaps by building a pond. Other costs are diesel, and plastic for mulching and for re-covering the polytunnels when they rip.

Luke reckons that his parents are probably bringing in about £30,000 a year in sales of fruit and vegetable sales, although it's a bit difficult to work it out because the farm shop sells wholefoods as well as their own produce, and quite a lot of veg is swopped for labour rather than being sold. Quite apart from the people actually working in the garden there are others, like Martin's osteopath, who also get paid in vegetables.

They've tried a lot of different ways of marketing. For the first few years Luke used to sell a lot of their produce in London – he did a run up every Monday evening and went round eight or nine wholefood stores and high-class vegetable shops. For the return journey Luke filled up the van at a wholefood suppliers with orders for shops in the West Country. In order to avoid the traffic, he arranged to do the deliveries at night and he once got picked up by the police at three in the morning as a result. They were suspicious of his battered van and unkempt appearance, and even though he had the keys to the shop which they had found him entering it was not until he produced his order book that they let him go. He used to get good prices for the vegetables on the London trips, but after a while the shops began to want two deliveries a week so that they could have fresh stuff on the shelves all the time. Luke didn't like the idea of doing the journey more often, and he was also beginning to face some competition, so he dropped it and began doing local deliveries to people's homes instead. He built up a round of about twenty-five customers, including two shops, and kept it going for several years. Many of the people on his round weren't interested in the vegetables being organic, they just liked the fact that they were fresh and local, and for some of the elderly people it made a big difference to have things delivered. It was a bit complicated trying to take orders from people: either he had to do it the previous week, if he saw them, or else he had to get hold of them on the phone later. It was never a very profitable way of doing things, but once he'd started it was hard to stop as his customers came to rely on him and he'd sort of got to know them all.

Four years ago Luke cut the delivery round down to the shops and two elderly couples whom he couldn't bear to abandon, and started running an organic vegetable stall at the weekly market in town. It has been hard work, but has proved very successful. He started out selling only his parents' produce, but he now buys in some imported fruit and out-of season vegetables. He is beginning to sell vegetables from other organic producers in the area as well, as Martin and Lily do not always grow enough to keep him going – particularly since they've begun to cut back on root crops because of the heavy work involved.

Since the very early days Martin and Lily have sold vegetables from the side of the road. They put their produce out on a table and in boxes on the ground, and leave a set of scales and a jar for people to leave the money in. For years they never had any problems with theft, but recently the money has occasionally disappeared. Lily reckons that she wouldn't mind if people took the food, if they really needed it, but doesn't like them making off with the cash. For the present she has simply changed the system so that, instead of using the jar, people put money down a tube which leads to a bucket under the table. It makes the cash a bit less obvious, and locals who need to change a note can just reach under and pull the bucket out. Lily now runs a proper farm shop as well, so the table generally has staples like potatoes, onions and carrots, and anything that happens to be in surplus – they don't put salads outside because they wilt too quickly. Luke puts out whatever is left from the market stall as well, unless it's bruised or damaged, in which case it goes to the pigs.

One reason for keeping the table as well as the farm shop was that local people liked to be able to get a few vegetables without having to ring the bell and bring someone away from their work in the garden, and because some of them had got used to buying things at any time of day or night. The farm shop itself is open from ten till six, six days a week. They try to keep it closed on Sundays, but over the summer tourists come up to the house and ask for things if they can see stuff growing in the garden that isn't out on the table, so on busy weekends they sometimes open both days.

The farm shop developed more out of Lily's wholefood bulk buying group than from the vegetable side. When Luke was bringing wholefoods down from London he got things in bulk for the house, and gradually various friends began tagging on orders as well. When he stopped the London trips, Lily began to co-ordinate a bulk-buying system, and got a delivery once a month which she then split down into orders for a dozen or so households. The work of re-packing was supposed to be rotated, and people did volunteer, but because the delivery came to Paley's and people picked up their orders from there, Lily always did most of the work. When the group became larger and the whole palaver occupied the best part of a weekend each month, Lily decided to call a halt and instead started the farm shop to sell wholefoods at low cost alongside their own vegetables.

The shop also sells environmentally-friendly washing up liquid and laundry powder, recycled toilet paper and a few other things that Lily can get on the wholefood order. Recently she's started stocking some Traidcraft products: tea and coffee which are not organic but which are imported directly so that the producer gets a higher price. The bulk

buying group started as a way of cutting out the middleman to buy things cheaper, and none of what they ordered was organic, but since all the vegetables in the shop are organic, people sometimes expect that the wholefoods will also be organic. Ideally Lily would like to stock both, so that people could choose organic if they could afford it, but it would mean carrying a lot more stock so she hasn't done so as yet. The only thing in the shop apart from the vegetables that is organic is the flour, and that's because for years they'd been getting a batch of wheat each autumn from an organic farm, and taking it to be milled at a windmill. They get through a lot of bread, what with elevenses and lunches for the volunteers, and ever since the Rayburn was installed they've baked their own.

The farm shop also sells jams and pickles made from surplus produce, but this may be a problem in the future because of the EC food regulations: the kitchen at Paley's certainly couldn't withstand inspection by the environmental health. The 1992 food regulations have already scuppered Gillian's idea of having an outdoor cafe for tourists in the summer; if she was already doing it she might be able to continue undisturbed, but when she made enquires about starting something up it became clear that the new legislation was so demanding that the cost of setting up a kitchen was prohibitive, particularly as it would only be used for a few months of the year.

There is some passing trade from tourists, many of whom are on self-catering holidays and therefore often buy vegetables. A few people come from long distances specially to get organic food because they have allergies to agrochemicals, or because they have cancer – the Bristol cancer clinic gave out their address for a while. There's even one woman who claims to be allergic to plastic, and comes to buy the vegetables because they haven't been wrapped. Lily doesn't have much patience for that sort of faddishness, and is glad that most of the custom is local. She bases the prices in the farm shop on the greengrocers in town, and rarely sells anything for more than people would pay there and often it's less – if they have too much of one crop. Occasionally if there is a real glut Luke will take things away and sell them without any organic labelling to what they call 'intervention': the wholesale vegetable market. Neither Martin or Lily really approve of the idea of an organic premium; they don't want good food to be seen as a luxury.

There's a lot about the image of organic food that they're not too happy with, and although they have always been registered with the Soil Association for growing fruit and vegetables they've never had much else to do with them. Only since they started the farm shop has there even been a sign saying that their produce is organic – the table never had one. They both hate the sort of hype that the supermarkets have generated for

organic food, especially as the vegetables that are then sold under that banner are several days old, packed in plastic, kept under lights and sold for at least three times the price that the grower gets. To them, it represents a big business take-over of something – growing food – which is fundamental to human life. The main reason why Martin and Lily have never considered joining a co-op is that the co-ops, by selling to supermarkets, have become part of the marketing chain which distances people from the source of their food. Martin, in particular, feels that it's very important for people in this country to have at least some experience of providing for themselves by cultivating the land, and he sometimes regards their volunteers and WWOOFers as a sort of crop: people who have grown and learned at Paley's.

It's not just the emotional or spiritual aspect of having contact with the land which Martin feels is important; he claims that we are on the brink of the 'post-industrial' era, and his self-appointed role is to teach people the skills which will be needed in a future without fossil fuels. He doesn't deny that Paley's is heavily reliant on diesel for the tractors, and it doesn't stop him using the electric lights in the house, or indeed using the car, but there is an undercurrent of reminders that such things are a temporary extravagance available only to those who happen to be born rich and in the twentieth century. Conditions in the house are in any case pretty primitive: the roof is well insulated but the Rayburn provides the only heating, apart from fireplaces in the upstairs bedrooms. Most of the cooking is done on the Rayburn, although there is a stove run off bottled gas as a back-up. They have a temperamental old television, but rely mainly on the radio for the news and weather; they don't get a newspaper and their only magazines are the *New Farmer and Grower, The Grower,* and Martin's *New Scientist*. The furniture is almost entirely from Luke's auction trips, and the only piece of electrical equipment in the kitchen is the fridge – which it is small and decrepit – although there are several large freezers in the hall full of meat and frozen fruit.

The Horseman's philosophy is that it is people that really matter, rather than material conveniences. The way they run Paley's Orchard is a deliberate expression of these concerns; neither Martin or Lily are totally opposed in principle to the use of fertilizer, or even pesticides, despite having seen in Africa some extreme examples of the problems caused by chemical agriculture. They grow organically because they anticipate a time when it will be a necessity, and they want to start now, to show that it is possible and to teach people the skills.

5

FARMING AND GROWING ORGANICALLY

5

FARMING AND GROWING ORGANICALLY

The composite studies of the previous chapter illuminate the motivations and values of organic producers by embedding them in the context of family and farm histories; in this and the following chapter I shall examine organic value-systems more explicitly and systematically. Because the organic movement brings together very diverse people there are exceptions to any generalisation, which can make discussion of organic attitudes to any particular issue appear contradictory. However, the composite studies should serve as a reminder of how people's individual positions are generally coherent, although they are not all identical and do not all correspond with that of the 'organic movement'.

The device of using composite studies provides an organising principle for presenting the qualitative data derived from interviews and study visits. Chapters 5 and 6 draw on the same pool of data, but use it in quite a different way. Some of the 'cameo-situations' which illustrated particular issues in the composite studies will be seen to correspond closely to quotes in these two chapters; the different insights which can be drawn out from the same data give added justification to my decision to use both modes of presentation. Chapters 5 and 6 do not explicitly refer back to the composite studies, despite the multitude of underlying connections. As the discussion is illustrated with quotes drawn directly from the fieldwork – interviews and survey responses – I felt that it could become confusing if I also cited the composites as examples.

This chapter is divided into two main sections; the first looks at four ways in which farmers and growers can benefit from producing organically. One way is through increased profits; another – particularly relevant to conversion – is gaining independence from agrochemical companies; thirdly, some farmers find it more personally satisfying to farm in a more traditional manner; and, lastly, some people have followed an urge to leave the city and work close to the land. The second section looks at the wider environment, health and welfare issues, and at the ways in which these can be motivating concerns for organic producers.

Organic producers do not necessarily see conventional agricultural methods as wrong; they may just feel that they do not pay sufficient regard to wildlife, for instance, or to the problems of soil degeneration. But some conventional farmers and growers do honour such concerns; one organic farmer reported that her neighbour is:

> *... a farmer of 1,300 acres, but he still thinks that it matters that the land's in good heart and the hedges are right, he's got it balanced as he feels it should be. He's not organic but he farms in a moral framework as well as a money one.*

Some people who are already farming like this choose to make a more public statement of their intent and to gain the benefits of premium prices by registering as organic – even if they do not agree with everything that the organic movement stands for. Although many farmers who have converted land in this way have become increasingly convinced of the benefits of organic husbandry through the experience, they are often resistant to any suggestion that they should change the way they live just because they are farming or growing organically. Chapter 6 is entirely devoted to a discussion of people who are 'really organic' – people whose whole lives, rather than just their agricultural practices, are shaped by ideas which are 'organic' in the holistic sense. Many of the issues covered in the current chapter are relevant to them, but the focus at this stage is on those people who are reacting to specific issues rather than trying to construct an all-embracing world-view.

Personal Reasons for Producing Organically

'Organics' for profit

British farmers are used to being urged to diversify as a way of propping up falling farm incomes. Golf courses, 'adding value' by on-farm food processing, water sports centres,

mohair goats and Japanese mushrooms are all vaunted as potential money-spinners. Even raising ostriches is proposed – for leather, ostrich steaks and giant omelets; feathers are passé. When the Royal Agricultural Show allocates a pitch to 'The Organic Food and Farming Centre' marquee it is in the 'New Farm Enterprises' section of the showground, just around the corner from pens of llamas, displays about dirt bike racing – and ostriches.

Categorising organic farming as a diversification in this way is a safe option for conventional farmers, epitomised by the *Farmers Weekly* headline 'It's Big, Organic and Profitable' (1987). If organic farmers can be viewed as trying to make money by pandering to a yuppie fad for all things green it implies that they are, if not actually cynical about it, at least making a business-like decision which other farmers can ignore if they choose. Instead of being an entirely different way of farming with claims to moral superiority, it becomes a set of techniques, dubbed 'organics', which may or may not prove to be a good marketing strategy. Some organic producers see themselves in this light. On the survey form I sent out to Soil Association symbol holders one producer wrote:

> *Farming is not a charitable institution. First and foremost we have to make a living. If by diversifying into organic production, we can increase our income, that is a good thing.*

One of my interviewees, who was registered as organic for purely pragmatic reasons, gave me a booklet produced by *Farming News* and *Hoechst* (undated) to support his defense of conventional farming; *The farmer's guide to putting the record straight* promises, among other things, quick answers to the claims of the organic fraternity![1] Another interviewee, a farmer who had converted about a third of his farm land in order to grow organic cereals and root crops, explained his attitude as follows:

> *I actually think that if organics don't click and take off in the '90s, the game's knackered, and this is the only time to be involved in the thing. It's quite interesting to see the thing growing and be part of it. I think that, if it doesn't click in the '90s, after the year 2000 the thing might be on the way down or a plateau. There's two general elections, at least, to be held in the '90s and all the parties will be jumping over each other saying I'm greener than the other lads; and it's in the public eye just now. I think that's the big advantage. There is a genuine market for it and people are clamouring to buy the stuff. ... I actually don't feel that I should be subsidising it by my other*

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[1] The booklet counters 'myth' with 'fact'. One 'myth' is "The use of crop protection products is widespread." The 'facts' presented in contradiction of this are that "Over 70% of the land in Britain receives no treatment from crop protection products at all" and that the use of crop protection products has decreased in the last eight years by 41% – by weight. Of course, most of Britain's land is not arable, and it is therefore unsurprising that crop protection products are not applied to it, and quoting the tonnage of products used is misleading because the trend during the last decade has been to market them in increasingly concentrated forms.

enterprises, it should stand on its own two feet. If it can't stand on its own two feet then it's just going out.

Although the premiums can look tempting, diversifying into organics is not a straightforward way of increasing profits. The process of converting land from conventional farming to organic is generally accepted as being financially difficult, not only because of the mandatory two year conversion period but also because it can take much longer than that for soil to regain the fertility and soil life that organic agriculture relies on. There are savings on inputs, but cereal yields in particular do fall. Farms which were previously all arable have to start using rotational systems which either means introducing animals to graze the leys (usually involving high capital costs, and grazing land is less profitable than cereals in any case), or else having a green manure break – in which case the land generates no income at all for part of each rotation. Farms which are all-livestock have to reduce their stocking rates.

Despite the difficulties of calculating the financial implications of converting to organic, there are a significant number of organic producers for whom the hope of increasing profits is important. In my survey of Soil Association Symbol holders, 12% said that they would not continue to use organic methods if they knew that they could make more money from conventional production (see Figure 6 in Appendix 1). However, this figure was only 4% for people who had no experience of using conventional methods – people who had come into organic production from other occupations rather than changing from conventional to organic techniques (including many who accepted that their income would drop when they left professional jobs in order to farm or grow, and some who still maintain outside jobs). Among those who had previously farmed or grown conventionally on a commercial scale the figure was 18%. The proportion of people for whom the hope of increased profits is a crucial factor is doubtless higher still among those who are registered with OF&G, since this organisation has consistently promoted itself as being more pragmatic and realistic than the Soil Association.

In general, whether a producer is likely to be able to increase profits by registering as organic depends to a large extent on where they are starting from. There are a few people on mixed farms who are now registered with the Soil Association because it allows them to get a premium price, but who had previously been complying with most of the organic standards without knowing it, because they had persisted in farming the way they learned from their fathers while everyone around them intensified. Welsh hill farmers have also found it relatively easy to convert; in some cases they only have to change their brand of sheep-dip, cut back on a few other medications and use an approved abattoir in

order for their lamb to qualify as organic. There are market gardens which avoided using chemicals for years before they actually registered themselves as organic. In all these cases, although applying for an organic symbol may be a financially motivated choice, it must be recognised that the more important decision, of how to farm or grow, was made long before and probably brought no financial benefits.

In 1991 OF&G were providing interested farmers with a costing sheet comparing the economic performance of winter wheat and winter oats under organic and conventional regimes. Both the organic crops came out about 25% more profitable than the conventional. This could provide encouragement for a farmer who was already running a rotational system and only had to alter their cultural techniques, but not necessarily to someone with a farm which was currently all arable – as they would have to forgo some years of cereal production altogether on each field they farmed organically. The existing fertility of the soil on a farm can also have a huge effect on the productivity after conversion.

Among the farmers I visited the one whose profits had increased most dramatically had started growing organic vegetables on one field of his organic rotation. He had previously produced beef, lamb and cereals, and because it was already a mixed farm the overall profitability changed very little when he converted to organic. He did, however, make a substantial extra income when he started growing vegetables, and it was not so much the organic premium that made growing them worthwhile, but the fact that he could sell them at all. Growing vegetables conventionally on his farm simply would not have been an option; the growing conditions were not ideal and he would have been putting himself in competition with people in more favoured areas. There was no tradition locally of growing vegetables, and hence no infrastructure for marketing them wholesale. However, because his produce was organic he found that a specialist organic wholesaler and several shopkeepers were prepared to come and pick them up from his door.

The advantages of using the organic image as a marketing 'peg' are most noticeable with fruit and vegetables. Organic grain is much in demand and commands a premium price, but the actual selling is generally done through merchants, just like conventional grain. With meat and livestock, marketing tends to be made more difficult by the organic status. However, most organic vegetable producers, and particularly the smaller market gardens, benefit from the fact that the appeal of organic vegetables makes it worth setting up small-scale distribution networks – although these are geographically patchy, and organic produce is often sold on the conventional market because it is locally in surplus even when in demand elsewhere. Advertising farm shops as organic is also generally a selling

point, and brings in customers from further afield than would normally be expected, although a few people are also put off – assuming that prices will be higher or simply thinking that it is not for them.

For a small number of vegetable growers, the possibility of selling organically what they could not sell conventionally is a primary reason for adopting organic techniques. A survey respondent with three and half acres of land wrote that their most important reason for growing organically was "greater profit from extended market opportunities". An interviewee insisted that his interest in organics was entirely that he wanted to keep his walled garden running as a traditional kitchen garden, and that the only way of disposing of the relatively small quantities of fruit and vegetables was to sell them through the organic network; he regarded anyone who actually bought organic produce as a crank.

The organic image can be exploited in other ways: another respondent wrote that they were "not a flag-waving idealist, save the world and all that" but that "organics seem a good way to capitalize on one of the national buzz words as P.R. for our tourist enterprise" – a guest house. They also hoped that it might add to the capital value of the farm land.

While some producers regard organics as a means of increasing profits, and some hope to benefit from the organic image in marketing produce, another pragmatic attitude is to see it as a way of minimizing financial risks, particularly in a situation where the alternative is to use conventional techniques which demand high financial inputs for an uncertain return:

> *We're out to try and produce stuff with the least liabilities so if things go wrong you haven't lost a lot. Whereas if you get all your fertilizer, all your spray and buy a new tractor – the pyramid of people you've actually carried on your back! And then you get some disaster at the end so in fact you've only got a tonne to the acre instead of three. They're all fed up there, you've paid all them, but you're the one carrying. With organic you're carrying half that number of people, if that. If you get a bit of a disaster it isn't sort of quite so bad.*

Proponents of organic techniques are usually careful to say that switching to organic is not a way to save a failing farm. But farmers who have a few misgivings about chemical use, and find that they cannot keep their farm profitable conventionally, are sometimes tempted to turn to organics on the principle that even if they still find it hard to keep afloat financially, at least they won't be damaging the environment as well:

> *I'll tell you what: an average conventional farmer, certainly growing grain round here at the moment, is losing money. This is what we looked at. We thought, well, we can't be any worse off.*

A survey respondent wrote in a similar vein:

> *There is no point in producing food conventionally, as the price one gets for one's produce is so low that the farm will go bankrupt. Also, if experts say that sprays and fertilizers are poison and bad for one's health I believe them.*

There are certainly some organic producers whose only interest in organics is to make money but for the majority, "farming is not just a matter of economics, otherwise most farmers would sell their land and invest it elsewhere", as OF&G put it in their *Introduction to Organic Standards* (1989: 6). People who choose organics as one of a variety of diversification options have chosen to stay in farming rather than selling up or turning their land over to leisure pursuits. And they have chosen to adopt a way of farming with claims to minimize damage to the environment and wildlife, to be sustainable, and to produce healthy food. Although some farmers who diversify into organics see their choice as purely financial, for most the wider effects of organic production are at least relevant, even if profitability remains the bottom line. What is interesting is not that some people are doing it for money, either wholly or in part, but the other side of the story: the number of organic producers who would continue to farm or grow organically even if they knew that they could make more money by conventional methods (88% of respondents to my survey).

Many people don't, in any case, make much from organic production. As one grower said: "if I was doing it for money I could make more by being an ordinary farm worker"[1]. Even among people with higher turnovers, ethical (or at least non-materialistic) principles are far more common reasons for people choosing organic methods of production than the desire to increase profits. Although those producers who manage to combine financial success with genuine organic concerns are respected there is, within the movement, a degree of wariness of people who are primarily motivated by profit. For one thing it is not possible to make the inspection system for organic producers entirely watertight, and people who put money first are regarded as more likely to break the rules. This is particularly an issue on farms – of which there are many – which are part organic and part conventional as there are more opportunities for foul play. Another fear is that when government grants become available, financially motivated farmers may be encouraged to convert and will

1 69% of survey respondents said that the sale value of their organic production in the previous year was less than £10,000 – this is turnover, not profit.

then be in competition with existing producers who had the conviction to use organic methods before such help was available[1].

Generally, however, people feel that it is not easy to make a go of farming or growing organically unless you really believe in it, because organic techniques rely on close attention and care; they are not just a formula. The attitude to people who start for purely financial reasons tends to be that they will either give up, or become convinced through experience of the wider merits of organic production.

Independence from chemical control

Organic agriculture is often simplistically defined as doing without chemicals. Of course, it is only very particular sorts of chemicals which are to be avoided, and it is also well understood within the organic movement, if not outside it, that the non-use of agrochemicals is only a first step, and that there are many positive requirements of organic husbandry.

Some organic producers stress these positive aspects – such as the use of techniques like rotations for fertility building and weed control, green manure crops, and the management of animal manures – while maintaining a pragmatic attitude to agrochemicals. They sometimes use herbicides to keep down weeds on gravel drives, or acknowledge the need for them in forestry. A few think that a good dose of Round-up, a broad spectrum herbicide, might sometimes be a sensible way of starting an organic conversion – to get rid of persistent weeds that otherwise might remain a problem for years. Others argue that in countries where hunger is an immediate and pressing problem chemicals are essential in order to get high yields. One organic grower felt that agrochemicals were used too much and too often in conventional agriculture, but said that personally he "wouldn't be averse to using bits of fertilizer sensibly and carefully, except you can't because once you decide to stick to a system then you've got to have the guarantee to the public".

Although some organic farmers think that chemicals have a place, most have a gut-reaction against them – even people on part conventional/part organic farms who still routinely use them. In response to the open-ended question of my survey which asked

[1] This fear was expressed during interviews in 1991; now it looks as if the levels of assistance will be so low that no one will be tempted to convert for that reason alone.

"what, for you, are the most important reasons for farming or growing organically?' many wrote such things as "not liking chemicals" or "the non-use of chemicals". Some of them explained that they didn't like chemicals for health reasons, either because they worried about chemicals in food or because of the dangers of working with them directly, and a few said that farming or growing without chemicals meant that they could involve their children in the work with less danger. Others were explicit that their rationale for avoiding chemicals was concern about pollution and effects on wildlife.

Both health and environmental issues are well recognised as reasons for using organic methods, and they are discussed in detail later in this chapter. At this point what is interesting is the way in which some people simply objected to agrochemicals as if it needed no further explanation, and how others deliberately heightened the emotional tone of their responses to the survey by referring to agrochemicals as 'poisons' or 'toxins'. One of my interview questions was to ask people whether they would consider using herbicide to get rid of a particular weed problem once and for all, and, like the survey, it elicited some colourful comparisons. One grower said it would be "a bit like using the atom bomb" while another first compared it to wearing a suit (but decided that wasn't strong enough as he had occasionally worn one) and then said it would be like cutting off a finger. He explained that he wasn't being 'goody-goody' about it, but rather that it would go against his sense of who he was. For organic producers such as these, rejecting chemicals is symbolically as well as practically significant. Chemical use is also frequently associated with the encroachment of industry into agriculture:

> *I couldn't actually do it, I couldn't use chemicals. It's funny, I'm actually more extreme than I need to be, because in a way there isn't really necessarily an objection to using a chemical; there are situations where you might need an extra input of nitrogen because there just isn't another way of doing it – as a one-off. But I would never do it. There's something wrong about heavy industry, heavy chemical industry, funnelling itself into nature, into growth, into the world of growth. For me that's kind of abominable, it just shouldn't be happening, and fertilizers of course are the least harmful of a whole bunch of things which are really terrible.*

The connection of chemicals with industry can also have immediate practical implications for the farmer. Some conventional farmers do think of farming itself as an industry, but even those who reject the image of farming as agri-business are in fact supporting the upstream industries of chemical manufacture and marketing. Farmers are usually also connected downstream, by selling into the food industry rather than directly to consumers. In addition, the bureaucratic web of subsidies and regulations affects every area of agricultural practice and encourages farmers to become business-like in their decisions even

when it contradicts principles of good husbandry. Some organic farmers are concerned about the downstream side, about how the food they produce is processed and marketed (see chapter 6), but strong feelings are more often expressed – particularly by those who have personal experience of conventional farming – about the amount of money handed over to chemical companies and the way in which farmers are manipulated by them. In responding to the survey many people stressed that they didn't want "to rely on", "be dependent on", "be in hock to" or "add to the profits of" the agrochemical industry (see also Fischer 1982: 233).

Producers who want to be independent of the agrochemical industry do not necessarily think that farming with chemicals is wrong. There are organic producers who regard the use of agrochemicals as justifiable in many circumstances but who are still personally very glad not to be relying on the advice of chemical reps and to be free from the anxiety of spending huge amounts of money on a crop without being sure of the effectiveness of the various fertilizers and sprays. The pressure put on conventional farmers to buy agrochemicals can be enormous:

> *They know how to get at you. It's like advertising on television – if you don't do this you're not doing the best you can for your crop. Like telling you you're not doing the best for your children unless you buy them this or that or the other. It's very insidious you know, it makes you feel guilty and as if you're not doing what you should, it makes you feel inadequate.*

A farm manager who had worked on a farm for many years before its conversion described farming organically as:

> *... trying to become self-contained in what we do without input from outside, without lorries arriving with things that I don't really know what they are, and that I don't really understand. I don't have to listen to advice from so-called experts saying put this on today and you'll get another two hundredweight an acre. Then somebody comes the next day and says that wasn't what you should have used, you should have used ours and got three. I had no way of knowing what was right, and actually, we never saw those increases in yields – we often did all the things they said, and we would have been growing eighty hundredweight to the acre! But you can never go back and say 'look this didn't work, can I have my money back?' They're not interested once you've used it.*

This manager had been to agricultural college and had a good understanding of agronomy, but he was aware that he couldn't hope to find out enough about each new product that came onto the market to be able to judge its worth himself. Inevitably, he had ended up relying on the advice of the vet, chemical reps and the occasional ADAS adviser. This left him implementing other people's advice and being responsible for the consequences

without being able to use his farming skills and judgement; it wasn't 'real farming'. As Fischer puts it:

> In modern agriculture the empathetic and intuitive sides of farming are increasingly subordinated to planning and calculating. Organisations become rationalised and mechanised. But in the process, part of the "soul" of being a farmer is left by the wayside. The emotional alliance with plants and animals is often – though not everywhere – submerged in the commotion. Some farmers have lost their connection with their own roots and also their trust in themselves. Imperceptibly they subordinate their own judgement to that of the professional. But in the self-image of the organic farmer it is just these elements that take pride of place. Some farmers believe that they only became "real" farmers when they set off on the organic route. (Fischer 1982: 234-5[1])

Since organic agriculture aims to minimize inputs, and stresses good husbandry rather than quick-fix solutions (both agrochemical and veterinary), there is little money to be made out of it by people upstream in the industrial chain – indeed, a partial explanation for the antagonism of the farming press is that organic farming does not generate significant advertising revenue. Organic farmers are able to escape, to a large extent, from the continual pressure to buy – although of course there is always the matter of machinery! The other side of the story is that organic methods demand more of the farmer: more involvement, inventiveness, closer observation and often a wider range of practical skills; but people who take the plunge of converting to organic tend to welcome this because it means that farming becomes more satisfying as a job. When things go well it is a personal achievement rather than just success-in-a-bag. It can be liberating to have proof on your own farm that chemicals are not essential; one farmer recounted how he "felt a bit more defiant" and began to enjoy giving chemical reps 'up yours' after he had converted some fields to organic and so realised that the others probably didn't need as many chemicals as he previously would have given them:

> *I remember him explaining, 'we're recommending three sprays for winter barley this time' – one was a bit of manganese, one was something else, there was three things. So I says, 'how many [problems] has it got?' And he says 'well, it doesn't seem to have any really'. So I says 'we'll not bother with*

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[1] In der modernen Landwirtschaft sind die empfindungsmässigen und intuitiven Seiten der Bauernarbeit immer mehr durch Planung und Berechnung abgelöst worden. Die Betriebe sind rationalisiert und mechanisiert worden. Dabei ist aber auch ein Stück weil die "Seele" des Bauernberufes verlorengegangen. Die gefühlsmässige Verbundenheit mit Pflanzen und Tieren wird oft – nicht überall – durch die Hektik beeinträchtigt. Manche Bauern haben die Verbindung zu ihren eigenen Wurzeln und auch ihr Selbstvertrauen verloren. Sie ordnen ihr eigenes Urteil oft unbesehen dem des Fachmannes unter. Im Selbstbild der organisch wirtschaftenden Bauern nehmen aber gerade diese Elemente einen wichtigen Platz ein. Mancher Bauer hat den Eindruck, erst auf dem Weg des biologischen Landbaus sei er wieder ein "richtiger" Bauer geworden.

that then!'. Just crazy – and he was a nice chap that. On commission probably.

Another farmer, who had completed the conversion of his farm said:

The job becomes more interesting because we used to say 'oh we've got a problem' and we'd go and ring up some specialist from a spray firm or fertilizer firm and they'd come along and work it all out and spend loads of money for you. This way you've got to sit down and say 'how are we going to do this?'. There's nobody else to ask, is there? Same with homoeopathy, you tend to do most of the veterinary yourself.

As well as being able to assert their independence from the agrochemical companies, organic producers often take pride in the fact that there is a real demand for their produce. Farmers who are used to the feeling that their cereals end up in EC intervention storage are heartened by the display advertisements in organic magazines from grain merchants who are "very keen to purchase" organic cereals and pulses. Producers with farm shops get feedback direct from the public:

The biggest pay-off are the times when I'm doing the pick-your-own fruit and I'm meeting the public. There really are a lot of people who are very happy with the organic ideal, very happy that people are doing it – actually growing fruit for example.

Organic farmers are able to claim some of the same subsidies, grants, and set-aside payments as conventional farmers. However, almost without exception, the organic farmers I talked to valued the feeling of usefulness it gave them to be producing things which were wanted, and much preferred to earn their money that way. Money from the government didn't give them the same sense of worth, even if the cash was often welcome enough in practice. Organic farming can be seen as a way of getting closer to standing on one's own feet, rather than being dependent on the whims of Brussels and Whitehall. Indeed, many producers seem to regard government grants rather like an act of God, or like the weather – often of critical importance but unpredictable and totally outwith their control.

In general, farmers who convert to organic are not only trying to escape from the influence of agrochemical companies, but also dislike the manipulative aspects of government support schemes. There are other, more tangible reasons for farming organically – health, wildlife, worries about sustainability of the soil and the use of non-renewable resources – but for people who convert from conventional farming to organic, regaining independence is a common, although sometimes unanticipated benefit.

Once people have some experience of farming organically and are convinced that it can work, they sometimes look back and see chemicals as "clever, but deceitful", or compare the process of organic conversion to coming off drugs: both the land and the income of the farmer have to go through the 'cold turkey' of conversion before they regain their health.

Turning to tradition

As I have described previously, organics can be regarded as a diversification option. Some organic producers see themselves in this light, and it sits well with the supermarket image of organic food as an up-market, specialist range. In this view organic producers are pragmatically supplying a niche market for vegetables grown without chemicals. However, it is difficult to ignore the fact that organic agriculture is not a neutral option for diversification; as an interviewee said, "it goes against everything that conventional farmers have been taught and told was right for years". Rather than being seen as an innovative diversification organic agriculture is more often regarded as retrogressive: harking back to traditional farming and carrying the implication that modern conventional agriculture is heading up a blind alley.

The reactions of conventional farmers lends support to the second interpretation. Some are frankly antagonistic: one organic producer was spat on when he first ran a Soil Association stand at the Yorkshire show, and others have tales of similarly aggressive encounters (indeed, I have had to put up with several simply as a result of admitting an interest in organic methods when talking to other farmers). This sets organics apart from other diversification options: no-one gets hot under the collar about people raising ostriches in the way that they do about organic farming. Conventional farmers may think that some forms of diversification are crazy, they may be saddened to see good farm land put to leisure use, or they may worry that they are missing a trick, but only organic agriculture can be construed as a criticism of their own farming practice. However, farmers who have converted to organic are in fact usually chary of censuring their conventional neighbours because they are well aware of the political and financial pressures under which they operate.

Criticism of people's farming methods can be taken very personally, and with reason. By and large, and despite the compromises that conventional farming involves, most farmers still like to see themselves as caring for the land they farm, and they often endorse the principle of stewardship. The very fact that organic farmers talk about re-building the health and fertility of land previously farmed conventionally implies that it has been degraded, which is not an easy thing for farmers to come to terms with – even though

conventional agricultural practices do not require a high level of soil fertility. This issue is, of course, most crucial in regions where intensive farming is the norm and the difference between organic and conventional methods is therefore at its greatest.

Organic farming can also be felt as threatening because it makes use of skills which many farmers have lost (or never learned) and yet which are still recognised as being part of the traditional identity of a farmer. For instance, modern farming is so specialized that many farmers have nothing to do with stock, and pesticides can stand in for country lore. As one interviewee put it, "modern farming can be a substitute for good husbandry"; and as a farmer wrote on their survey return, organic farming "relies on personal management rather than short-cut artificial aids". The organic movement reminds people that farming without chemicals is possible – but only if you are (or can learn to be) a good enough farmer, in the traditional sense of the word. It is hardly surprising that, as another interviewee said, some conventional farmers "almost seem to feel that the organic movement is a threat to their manhood".

However, not all conventional farmers react to organic farming defensively: according to my interviewees many of their neighbouring farmers have become increasingly sympathetic in recent years. This was attributed in part to the positive media image of organic food[1] but mainly to conventional producers acknowledging in principle the need for more environmentally sensitive agricultural methods. For instance, the neighbours of one organic farmer were reportedly of the opinion that he was lucky to be able to afford to do it (not that he had a private income – just that he was not in debt), and another farmer was told by a local conventional grower "You're doing the right thing, Bob, I'm not saying you're going to make any money, but I know you're doing the right thing".

For organic farmers 'doing the right thing' is a matter of good and appropriate stewardship rather than trying to re-create pre-war agriculture – which they are often accused of. In fact, the organic movement has roots which go back to the turn of the century, rather than being a reaction to the changes in farming after the Second World War[2]. The Soil Association are in any case keen to establish – on the very first page of their handbook for instance – that organic faming is not just traditionalism:

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1 Modern farmers have been taught to respect the demands of the market; so while media coverage may fail to convince them of the merits of organic food it can nevertheless lead them to view organic production as a credible business strategy.

2 Lady Eve Balfour's book, The Living Soil, was published in 1943 and the Soil Association's first journal in 1946; there were people writing about the issues even before that date, witness the anthology the *Organic Tradition* (Cornford 1988) which spans the period 1900 to 1950.

> Although it is based on some traditional methods of building soil fertility and controlling pests and diseases, it is also firmly founded on a modern scientific understanding of soil science, ecology and crop breeding, and it utilises many safe technological developments. (Dudley 1991: 1)

Organic agriculture may be genuinely forward-looking, but it undoubtedly also has an unusual degree of respect for practices of the past. This is admittedly selective, and it is particularly noteworthy that most organic farms do not eschew mechanisation, even though some small-scale growers do. From an organic viewpoint traditional, old-fashioned farming is seen as having been fundamentally better than modern conventional agriculture in terms of soil stewardship, animal husbandry, and a countryside where farming and wildlife could co-exist. All these factors tend to be valued by organic farmers, and so they are careful not to reject techniques simply on the grounds that they are old-fashioned. "Just because your grandad did it, it's not to say it's wrong" – as I was told firmly in one interview. Another interviewee had picked up tips from reading the records of a friend's great-grandfather's farm, and many put great value on what they learnt from their fathers even if they had not heeded it at the time. Sometimes the past simply serves as a reminder of what is possible:

> *When I left school it was right at the start of the fertilizer, and certainly at the start of the spraying days, there was nothing much done before then. I think it does at least give you the impression in your mind that you can run a farm without this stuff, whereas for everybody born since, well it's been here for ever and you've got to use it.*

Organic farmers do not, of course, have the monopoly on traditional methods; there are farmers across the country who have retained both traditional values and techniques (to a greater or lesser degree) completely independently from the organic movement. The premium prices have attracted some of these people to apply for an organic symbol, and they are frequently chagrined to discover that their farming does not in fact automatically count as organic. The standards for organic agriculture which were drawn up by the Soil Association, as well as those now legally enshrined by UKROFS, are not simply a re-statement of traditional methods; indeed they include some regulations, stemming from human health issues or a concern for animal welfare, which run counter to traditional practice. Once registered as organic it is not uncommon for traditionally-minded farmers to be uneasy about the wider connotations of the term; one wrote on the survey "I'm not a hippy or a crank – just a traditionalist!".

Out of the rat race... and back to the land?

So far I have been focusing on people who are already in farming and who have chosen to change, at least in part, to using organic methods. This situation of changing from conventional to organic practices is typical of farmers; my survey showed that people with larger total acreages were more likely to have had experience of farming or growing commercially using conventional methods (see Appendix 1, Figure 9). Most small-scale organic producers (who tend to be growers producing mainly vegetables – see Appendix 1, Figure 10) are people who have moved from non-agricultural work into organic growing without ever having used conventional methods. Such people frequently do not have the money to buy larger acreages and would not in any case want the responsibility of running a large farm, but additionally many of them are inspired by ideals which positively value doing things on a small scale.

People who have never been conventional producers do not, of course, have direct experience of the control of agrochemical companies, but like farmers who are converting land, many of them similarly feel that they are escaping from something – in this case the alternative of rat-race jobs and lifestyles that are out of touch with the earth. There is also a parallel with the way that farmers, in converting to organic, can be attracted by the image of traditional farming while knowing at the same time that some parts of that image are largely mythical and that others would be impractical or even undesirable in today's world. People who move out from towns and cities often carry with them an equally problematic vision of 'getting back to the land'. One grower explained:

> *One has an idea in one's head of what the perfect life would be and that involves growing, and growing organically because you're much more in touch with the process of growing and being part of the earth.*

But, as he also acknowledged, it is "a strange sort of ideal that in practice isn't really quite there". One almost universal characteristic of people who might describe themselves as 'getting back to the land' is that they have never been there in the first place. As a result, their choice is inevitably based on the image, rather than experience of the long-term reality. Although I met many people who moved into organic growing, smallholding or small-scale farming because of a sense of alienation in their lives, they were divided as to whether or not the change had actually provided them with what they had been looking for. Some people had found the life "a bit relentless" and several were trying to find alternative employment as a result. One couple were intending to stay on their small farm, although, as the man explained, they had stopped trying to make an income from it and were both looking for outside work:

> *We had a vision of a family farm, a self-sufficient oasis in the middle of a nasty brutish world, family togetherness, peace, harmony and tranquillity; but those ideals never quite got realised.*

Or, according to the woman, they "got shattered". Over seven years they had built up a successful market gardening and wholesaling business which eventually paid off the loan on the land. However, growing and marketing the vegetables was so time-consuming and exhausting that they ended up sacrificing the ideals that had originally drawn them to the life: they found themselves with little time and patience to spare for each other or for their children. Several other small producers were aware of similar conflicts in trying to do garden-work and simultaneously care for young children; even with older ones it is awkward if their summer holidays overlap with particularly busy periods such as silage-making or intensive polytunnel cropping.

Presumably some people have actually abandoned commercial organic growing for such reasons, but among those who persisted there are many who find the work genuinely rewarding in a personal sense. Respondents to the survey wrote, for instance, that it was "one of the few worthwhile jobs", that it was a "satisfying lifestyle" or that they were growing organically purely for "personal satisfaction". However, many of these people would never consider growing conventionally, so unlike those farmers who contrast organic methods with conventional farming, the comparison made here is with indoor jobs or city living.

Although many commercial organic growers have obviously been motivated by some of the same hopes and expectations as the wave of people who left the cities to set themselves up as self-sufficient in the 1970s, they do not all feel comfortable with the association. During the interviews some people went out of their way to deny any connection with John Seymour, the guru of the self-sufficiency movement: when I asked one woman whether there were any books which had influenced her the instant reply was "*not* John Seymour's" – but she then admitted that she had consulted it for making cheese! Although self-sufficiency holds the same attractions of living in the country and working close to the earth, organic growers who started out to earn a living from working the land, and indeed those who began with the ideal of self-sufficiency and only later began selling produce, seem to feel that self-sufficiency is innately self-indulgent[1]. At one extreme it runs the risk of being little more than a hobby for people with outside income, and at the other it can be

[1] The movement peaked in the late seventies, and in 1983 the core magazine, *Practical Self-Sufficiency*, changed its name to *Home Farm*.

construed as opting out of society. Commercial organic growers are often proud of their social role as primary producers, even if they also have other employment, while the fact that they are growing food for sale rather than just for their own consumption links them to society and defends them against the accusation that they are opting out. At the same time, there are some Soil Association symbol-holders who identify themselves as smallholders and are either aiming for self-sufficiency or at least growing mainly for their own consumption; they register as organic because they sell small surpluses and wish to use the symbol, and in order to demonstrate their support for the organic movement.

A related image problem is that of hippies: many people assured me that they were not hippies, and one woman persistently objected to anything 'ethnic': clothes, attitudes and occupations. While organic farmers are sometimes extremely irritated by having the hippie image foisted on them when it is clearly inappropriate, some small-scale producers accept the label. Even those who do not like the label are less threatened by it than farmers. When growers told me (unasked) that they were not hippies they were usually not being disparaging but simply stressing that by comparison they themselves were practical, hard-working and plain ordinary.

The different routes into organic production have implications for how people are viewed by their friends and peers. As discussed in the previous section, people who change their farming practice have to cope with the fact that neighbouring farmers often construe this as criticism, particularly in the past. People moving into an area to farm or grow organically are less affected by local opinion simply because they are not so embedded in the community. Old-time residents are perhaps also more tolerant of the weird ideas of newcomers than they would be if a local person took them up. When I asked incomers what neighbouring farmers thought of their ideas I usually got responses along the lines of "they've always known we're dotty really", coupled with stories of how interest and even respect had increased over the years. People who have moved into organic production from other occupations often also retain the interest and support of previous friends, even though they may be geographically distant. WWOOFers and other volunteer workers are also an important social phenomenon, and one which tends to benefit growers and smallholdings more than farmers simply because they can make more use of unskilled help. Organic producers appreciate the work done by volunteers but there is also the aspect that when it goes well – which is not always – volunteers provide a connection with the wider world and, by their willingness to work for free, affirm that what organic producers are doing is worthwhile.

Organic 'Concern-Issues'

This second part of the chapter treats the main substantive reasons for farming or growing organically as five 'concern-issues': local environment and wildlife (including local pollution problems); global sustainability; soil and sustainability; health; and animal welfare. These are not intended to represent a complete 'package' of organic concerns, indeed, many producers are only convinced of the importance of one or two of them and may even be antagonistic to others, but all of the issues are commonly cited by producers as reasons for choosing to use organic methods. Of course, some farmers and growers act on altruistic concerns such as these without being registered as organic, but if someone is already producing in a way which nearly complies with organic standards there are practical advantages to registering as organic: premium prices, specialised marketing opportunities, information exchange, and a sense of identity – although this latter can be problematic.

Although it is possible to be guided by these concern-issues while farming or growing conventionally, organic producers generally agree that it is going against the flow to do so. The concern-issues all represent values which organic producers feel are lacking in conventional agriculture. For some people this opinion is based on the experience of conventional production, while others have formed it by looking at the consequences of conventional agriculture from the outside. I am not trying to make factual assertions about whether or not organic producers care more about soil erosion than conventional producers. Instead I am concerned with organic farmers and growers *believing* themselves to be more concerned about soil erosion – for instance – than their conventional counterparts, and feeling that by being organic they are putting themselves in a position where they can act on that concern more effectively. Similarly when I quote someone as saying that Ethiopia's problems are partly a result of soil erosion it is not to make any claims about the situation in that country, but merely to demonstrate that my interviewee believed that erosion is a problem there.

Because the concern-issues are complex there tends to be disagreement about details; the following sections consider both how organic standards promote these values, and how, in some cases, they can be seen as conflicting with them. I also try to illuminate the differences in practice and attitudes which occur between people who are registered as organic for different fundamental reasons: for instance a concern for health on the one hand and for soil sustainability on the other. When organic producers claim that certain areas of concern are, or should be, irrelevant to the concept of 'organic', it is sometimes not

because they want to deny the importance of an issue, but just that they want to set some limits on how much is carried by the word organic.

Local environment and wildlife

Although 95% of respondents to my survey agreed with the statement "organic agriculture is better for the *local* environment than conventional agriculture", interviews revealed that producers differ widely in how important the environment is to them when weighed against other concerns. Producers are also influenced by the circumstances of their own farms or gardens; for instance, small acreages can be regarded as insignificant when assessing the environmental benefits of organic methods and some farms had plentiful wildlife habitats before the land was ever converted. People also vary in how widely they interpret the scope of the word 'environment', with some people considering their impact on 'the environment' purely in terms of the immediate surroundings of their farm or garden, while others are concerned about global issues such as fossil fuel use. Although many producers are convinced that organic techniques benefit the environment both locally and globally they are often much more deeply concerned at one level than at the other and tend to treat them as separate issues. This section is therefore concerned with producers' attitudes to the local environment and wildlife, while the following section considers global environmental issues.

For some farmers concern for the local environment and wildlife is more important than the broader concept of organic agriculture. One farmer, who had only joined the symbol scheme two years previously, told me that:

> *We planted fourteen areas with trees since 1963 and created two ponds. We've layered all our hedges – we've never had a hedge trimmer on the farm – we've always layered our hedges purely on the principle that it does encourage wildlife. And we've been fortunate in that we've twice won first prize in the [county] FWAG competition.*

Organic producers do not have the monopoly on environmentally sensitive farming, as demonstrated by this farmer, who only decided to eliminate agrochemical inputs and apply for an organic symbol after decades of deliberately farming less intensively than his neighbours and giving over areas of his farm to wildlife habitats. Conversion can make the management of some farms easier: a farmer described how before converting to organic he had gone to great lengths to protect the areas he regarded as 'wildlife territory', and explained that "it's much less important to keep the farm away from them now that we're not using chemicals". For some farmers positive measures such as letting hedges grow up, or not cultivating areas where special flowers like cowslips or globe

flowers grow, are the most important aspect of caring for the environment. Others have witnessed side-effects of conventional agricultural methods – which can be as dramatic as the defoliation of an entire row of trees due to careless aerial spraying – and feel that avoiding pollution and damage to wildlife, trees, wildflowers or rivers is a more important environmental goal than creating habitat 'islands'. Of course, farmers may react to this by becoming increasingly careful in their use of agrochemicals without going so far as to adopt organic methods, but some do convert as a result of such concerns.

There is disagreement among producers about whether it is more important to provide specific areas for wildlife, or to farm in such a way that wild species of plants and animals can live on agricultural land and waterways are not polluted[1]. However, the issue only becomes really problematic at the level of the organic and conservation or wildlife organisations who have to formulate policy. Organic producers and the Soil Association sometimes assume that they are supported in principle by the environmental lobby – not unreasonably, given that the agrochemicals avoided by organic producers are being blamed for environmental ills ranging from declining populations of birds of prey to algal blooms in waterways. However, many environmentalists are not wholeheartedly in favour of organic agriculture because their primary objective is to protect and create areas of uncultivated 'natural' habitat (Taylor 1989). Chronic agricultural surpluses in the EC and problems with the policy of set-aside have raised environmentalists' hopes that more land may be permanently taken out of agricultural production and be preserved as wildlife habitat. Organic agriculture can be seen as threatening this scenario because the lower yields mean that a greater acreage must be cultivated to produce a given quantity of food, and there is therefore less land which can be regarded as surplus (Arden-Clarke 1991). The organic movement is belatedly trying to convince environmentalists and remind its own adherents that the avoidance of agrochemicals benefits the environment beyond the boundaries of the farm itself. It also claims that some forms of wildlife live more successfully on organic farms than on conventional ones[2], and that 'island' nature reserves are therefore not so essential (*New Farmer & Grower* 35: 31). Most producers are well

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1 When averaged over a full rotation nitrate leaching is lower than on conventional farms, although there can be substantial losses following the ploughing in of a ley (Lampkin 1990:63). There is, of course, no run-off of synthetic agrochemicals from organic farms.

2 Such claims are supported by the British Trust for Ornithology's research project comparing bird populations on organic and conventional farms. Preliminary results show that "over all species, hedgerows on organic farmland hold higher densities of territorial birds than those on conventional farmland" and "Skylarks were significantly more frequently recorded over organic than over conventional cereal fields, and significantly more frequently over organic grass than over conventional grass fields". (Wilson 1993: 11)

aware of this debate and many referred to it or re-formulated it in their own words during interviews.

As part of its attempt to woo the environmental lobby the Soil Association has stressed the importance of the section of its standards on 'conservation and environmental husbandry'[1]. For example, the Soil Association currently prohibit hedge trimming and ditch clearing between the end of March and the beginning of September, and recommend that such practices should only be undertaken between January and March. The rationale for this is that hedges and ditches should be undisturbed during the bird nesting season, and ideally should be left through the autumn and winter to provide cover so that birds can feed on hedgerow fruits. Some producers, while acknowledging the importance of wildlife and conservation issues, are unhappy about the increasing scope and detailed prescriptions of organic standards, and they see the conservation section of the standards as a bolt-on extra which is peripheral to the organic concept. One grower suggested an alternative set of standards for food grown on land which was managed in ways which would promote wildlife. She speculated that this might be even more popular among consumers than the organic symbol, but she was clear that her own aim was narrowly focussed: to produce vegetables without depleting the fertility of the soil and without recourse to agrochemical inputs.

It is perhaps significant that it was a grower rather than a farmer who made the above suggestion, because it is noticeable that organic market gardeners tend to be less motivated by issues of local environment and wildlife than the farmers. This is partly attributable to the fact that farmers control larger acreages of land and so their adoption of organic rather than conventional methods results in a greater reduction in agrochemical pollution. For the same reason, farmers tend to find it easier to give over areas of land for nature conservation; they have more trees and hedges under their care, and larger numbers of birds, mammals and indeed invertebrates are affected by their farming methods. A farm manager on a 900 acre farm described the pleasure he took in seeing partridge on the farm:

> *There are always partridge along our drive. They live in the field beside the drive and it's such a comfortable sort of feeling seeing them and knowing that when they have their ten or twelve offspring, you're not going to drive over them with the sprayer – which is what we did every year. I always used to feel so guilty about it, knowing that they were in that field*

[1] In early 1993 the UKROFS adopted many of the requirements (and indeed much of the wording) of the Soil Association conservation and environmental husbandry standards; all organic sector bodies in Britain are now required to apply these.

somewhere and that the tractor driver was going to sort of squirt them. And how many would survive that?

On a 900 acre organic farm this sort of 'comfortable feeling' may be warranted, but someone with a few acres of garden cannot offer the same degree of security to birds which are likely to spend much of their time on neighbouring conventional farms.

Most small-scale producers, while agreeing that organic methods are beneficial for wildlife and the local environment, tend to put this forward as a reason for more farmers to convert to organic, rather holding it up as a benefit of their own activities. Indeed, some growers are aware that they have had a negative impact on wildlife – by commencing intensive vegetable production on sites so constricted that they had to clear trees, hedges and wild corners in order to make space to grow crops[1]. However such clearing of land is, of course, a consequence of people choosing to grow vegetables, rather than a result of organic techniques.

Another reason why wildlife and local environment issues can be less important to people with smaller acreages is that fewer of them have ever used conventional methods[2]. Without that experience people do not have the personal and intimate awareness of the difference it can make to wildlife. Similarly, the picture that came out in interviews was that farmers were far more likely than growers to have inherited custody of their land from their parents[3]. Although nearly all organic producers are concerned about the local environment to some degree, those who have grown up on the land they now cultivate have the advantage of personal knowledge of ways in which the local environment and wildlife populations have changed. Such knowledge provides content and depth to any feelings of concern, and although incomers can make a positive attempt to learn about such things, by observation and by talking with locals, they do not always do so.

There are, however, some organic producers who are incomers and/or have limited acreages and yet who feel very strongly that the contribution they are able to make to the local environment is of great importance. For instance, one grower who counts himself as an

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1 Such practices are 'restricted' under Soil Association standards, which means that special permission is required. However, the restrictions are aimed mainly at farmers, and they do not, in any case, prevent people from clearing land before they apply for the Symbol.

2 According to my survey only 23% of organic producers with less than 10 acres have farmed or grown commercially using conventional methods, as compared with 87% among producers with more than 100 acres.

3 My survey shows only 13% of people with less than ten acres had parents who were commercial farmers and growers (and thus might have been in a position to pass on land), as compared with 63% of those with over 100 acres.

incomer uses five of his eighteen acres for vegetable production; the rest is partly planted with trees and partly preserved as bog. He described himself as trying to create an oasis for wildlife, so that when farmers do mend their ways there will be somewhere for wildlife to spread out from, and he counts his vegetable-growing land as part of this oasis because wildlife can co-exist with his organic production methods.

This idea of an organic oasis was mentioned several times in responses to the survey, and seems to represent the ideal of "a rich, diverse and beautiful countryside" in contrast to what some organic producers see as a surrounding desert of agro-farms". Other people are concerned to maintain the beauty of the traditional landscape, which they sometimes explicitly regard as part of the nation's heritage. Such environmental altruism is, however, frequently interwoven with pragmatic considerations. Thick hedges benefit wild mammals – they become 'linear woods' through which animals can move about the farm under cover, but hedges also fulfil a practical function on organic farms because they harbour predatory insects which help to keep crop pests under control. Similarly, farmers plant trees for a number of different reasons. One farmer, who was planting two new hedges and many trees as well as protecting existing hedgerow saplings, justified all this in purely practical terms – explaining how the stock benefited from their shelter and the shade they cast. Other organic producers are explicit about claiming that trees have value simply in themselves:

> *My own feeling is that there's no point in even trying to make farm woodland commercial in any sense. That doesn't mean to say that one shouldn't plant trees at all, but one should plant trees for the sake of planting trees, rather than for the sake of making any money out of them at any stage. Plant them so they are just there. I would really like to feel that a significant proportion of any holding could be designated as just being there, for non-human use. I think it's extraordinary and deplorable really, and highly anthropocentric, the way we seem to regard 100% of the acreage as being at our disposal – I don't think it should be.*

Farmers frequently justify environmentally beneficial management practices in different ways to different people. This does not imply that they are being hypocritical, because they often genuinely have more than one reason for what they do. If they are meeting other local farmers in the pub it tends to be more socially acceptable to concentrate on practical and financial benefits, while if a FWAG adviser comes to visit, or a customer at the farm shop makes enquiries, it can make sense to stress the farmer-as-steward-of-the-countryside angle.

The manner in which people go about a project – planting trees for example – is often more revealing than their explicit explanations. Some people, even when planting native

species as an environmental initiative (rather than, say, creating a shelterbelt), have a rather military attitude towards the trees and plant blocks of them in parallel rows. Others try to mimic natural regeneration and plant along watercourses or other existing features of the farm. Furthermore, not all organic farmers treat trees organically. The standards do not permit herbicide spraying around trees or hedges which are near cropped fields, but woodland areas are not always registered with the Soil Association – even on farms which are otherwise fully converted. A significant number of organic producers feel that the use of herbicide can sometimes be justified when planting trees, but some of my interviewees were determined to rely on hand-hoeing and one had spent nearly £2,000 in a year on employing people to do so. Surprisingly, only a few were experimenting with mulches.

Another common environmental initiative is to create a pond, but again the ponds people actually make differ widely. Some of the ones I was shown were surrounded by recently planted native trees, had islands to provide safe nesting for birds, and were shallow around the edges to encourage the growth of water plants. One farmer had even tried to encourage the colonisation of a new pond by stocking it with individual toads and newts found on other parts of the farm. At the other extreme some ponds are dug with steep sides (and thus little shallow water) and little attempt to protect or establish trees and shrubs around them. This can be partly explained by the fact that making ponds, and indeed tree planting, is often intended partly to encourage birds for shooting, rather than to benefit a wider range of wildlife.

It is a commonplace argument that copses and spinneys have been retained in the British landscape because of their value to sportsmen, and this point of view was put forward by several of the farmers whom I interviewed. One of them said flatly "The sportsmen of this country are definitely some of the best custodians of wildlife: they're the first people who will be concerned if the population of anything goes down – like hares." Another gave me a long description of the different types of huntin' country and the traditions surrounding them, in order to show how hunting was deeply embedded in the local rural culture, and therefore something to be preserved.

Quite apart from any historical significance, bloodsports are an important leisure activity for many farmers today – including some of those involved in organic production. One woman said "shooting's good for my husband, because it gets him away from farming". She later explained that shooting with a syndicate on their own farm was in fact his only

leisure pursuit as his parents objected to him leaving the farm – even in order to take beasts to market.

Hunting and shooting can be justified in stronger terms; as one farmer explained:

> *If someone does hunt and shoot they understand a little bit more about the countryside and wildlife. They have a much broader view of how dependent every little bit of nature is on another bit of nature; in nature everything lives on something else, nothing is wasted.*

This opinion is not widespread among organic growers, and those organic farmers who put it forward are well aware that city-dwellers are unlikely to sympathise with it. The argument is more than a defence of hunting or shooting; it is saying that people's relationship with nature should be participative rather than distant and sentimental. Farmers who take this view are commonly irritated by consumers associating organic food with vegetarianism when in fact, unlike conventional arable cropping and horticulture, organic production is typically dependent on fertility from animals.

Global sustainability

Some organic producers summarise their motivations for farming and growing organically in apocalyptic terms: one claimed that is "the only way to ensure survival of the human race", one that it "will help us to heal the earth", while others simply wrote "The Future", or "Sustainability!" in answer to the open-ended survey question.

Such concerns can be compelling, and for some people they are the underlying stimulus for using organic methods. Others feel that global ecological and social concerns are too remote and complex to be influenced by individual action, and laugh at the idea of anyone trying to 'save the world' by farming or growing organically. A few producers argue that organic methods are not even appropriate world-wide, because in some areas the most immediate need is to provide large quantities of food; on this view, organic agriculture is an environmental luxury which can only be afforded by wealthy countries.

For producers who see the development of sustainable methods of land use and food production as a priority, the use of fossil fuels is a pressing issue. Organic arable crops use up to 60% less fossil energy per unit of food produced than conventional ones (Lampkin 1990: 584)[1]. Much of this saving is due to the avoidance of agrochemicals, as the

[1] Most of the research has been on arable or mixed farms; organic livestock are probably also more energy efficient, but vegetable crops may not be if there is heavy reliance on mechanical weeding.

manufacture of fertilizers and to a lesser extent pesticides, is energy-intensive. Nitrogenous fertilizer is made from gaseous nitrogen in the air, and requires the natural gas equivalent of six barrels of oil for every tonne produced (Hall *et al.* 1986: 124). There can also be some reduction in fuel use on the farm, as tractors are not used for spraying, but organic farmers are nevertheless reliant on fossil fuels for the cultivation of soil, sowing, harvesting, drying and transporting crops – which, for the producer, are the most visible uses of fossil fuel. Although many people are worried about the dependence of organic agriculture on fossil fuels, solutions are hard to find. This farmer was typical in that he forecast the need for what he called a 'post-industrial' system of agriculture, but was unsure what it would be like:

> *Our organic system is heavily oil dependent and not that impressive in terms of ratio of energy input to output. I think we have to do a great deal better than that. I feel that even if we get the farm fully converted to what are now perceived of as organic standards, we have to do better than that. But we have to find out how to do it, because it doesn't seem to be being done as far as I'm aware.*

Contrary to one of the popular prejudices about organic farmers, a return to horse power is not generally considered a viable or desirable option; farmers are more aware than most people of the gruelling reality behind that romantic image. Even market gardeners usually have a tractor or rotavator to do the hardest work, and some larger growers are highly mechanised.

In the absence of obvious ways of reducing fuel use on-site, producers often bemoan the energy costs of transporting produce: supermarkets are castigated for using central depots, which means that produce is "carted up and down the country" before being offered for sale. The import of fresh fruit and vegetables out of season is also often thought to be an unjustifiable use of fossil fuel. Many organic producers nevertheless buy such imports, and some identify a conflict with mainstream nutritional advice – fresh fruit and green vegetables have long been advocated as a central part of a healthy diet, although Britain can only produce such crops at certain times of year.

The use of plastics is also debated among organic producers. Although they are derived from fossil fuel their use is often seen as reducing overall energy consumption. For example, plastic polytunnels mean that the growing season is extended, which is not only more profitable for the grower but can also reduce overall fuel use, as shops often sell imported produce when home-grown varieties are not available. The issue is trickier with horticultural plastic sheeting used for weed control, as the savings tend to be in human labour rather than fuel. Although one grower insisted that it is "not the organic way

forward, to cover your land in black plastic", many are convinced of its advantages. Those growers who do use plastic mulch tend to be conscious of the ecological impact: weighing the advantages of heavy grades of plastic – which can sometimes be used for more than one year and which can be recycled, against lighter grades – which contain less plastic per square yard but cannot be re-used and are not always accepted for recycling.

Producers usually choose fossil fuel, including derived plastics, as the prime example of unsustainable resource use. In fact organic standards permit various inputs, such as phosphate, of which there is a finite supply, and others – like seaweed – which could cause environmental damage if extracted in large quantities. It is not possible for producers to make informed decisions about all such products, and to an extent people rely on the standards to do it for them. However, they do not always find it easy to adapt their practices when standards are tightened up, as witnessed by objections to restrictions (because of habitat destruction) on the use of peat[1].

Avoiding over-dependence on finite resources is only one aspect of sustainability: another is to avoid causing pollution. Conventional pesticides travel and persist as pollutants in both water and air, and are implicated in causing ozone depletion; soils fertilized with synthetic nitrogen emit increased amounts of nitrous oxide; intensive animal production generates both methane, a greenhouse gas, and ammonia, which contributes to acid rain (Greenpeace 1992: 26-8). However, pollution is not much discussed among organic producers; those who have fully converted their land feel that they have largely solved the problem on their own patch, while those who have not are generally reluctant to defend their continued contribution to such pollution except in terms of financial caution. There is in fact some potential for pollution from organic systems but the general attitude seems to be that it pales into insignificance in comparison with what is happening over the fence.

When people think in global terms the potential for sustainability is not always the most pressing issue. The 'green revolution' has damaged both soils and traditional social structures in developing countries (Shiva 1991), but many organic producers who are aware of this are nevertheless wary of recommending organic methods as a panacea. A few think that the population of many countries already exceeds the 'carrying capacity' – there are more people than could be fed by sustainable, organic methods – and that conventional agriculture is the best short-term answer to a problem which is fundamentally insoluble.

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[1] For discussion of this issue and of the alternatives to peat see *Living Earth* 175: 20-1.

Others think that most countries could in fact support themselves using organic methods if depleted arable soils could be restored to full fertility, but they are aware that such long-term projects are difficult to justify, let alone implement.

Some producers simply do not focus on the sustainability of different agricultural methods, and prefer to justify their choice of organic methods in terms of tangible benefits to soil, health or the local environment. From this viewpoint, organic production is an irrelevance for many countries:

> *When people don't have any food who's going to care how it's grown? It's really a luxury for us to consider things like that. Whether it's organically grown or sprayed to death at least it's giving some nourishment. I think organic is way down the list of priorities for countries that have a hunger problem.*

Other farmers and growers, while accepting sustainability as a goal, and thinking that organic agriculture has much to offer in this regard, see the immediate problem of hunger as a matter of unjust distribution rather than lack of production. Organic producers in this country can hardly hope to right internal injustices elsewhere, but a few of them are conscious of wanting to avoid being involved in exploitative international trade. For example, by feeding livestock mainly on grass rather than feed mixes, farmers are able to produce meat with less reliance on imported grain and soya – which often come from countries where humans are malnourished.

Many organic producers in Britain admit to being confused and ill-informed about the worldwide problems of food supply and changes in agricultural methods, although there are some outstanding exceptions to this, especially among people who have direct experience of rural life in developing countries. There are also a fair number who believe so strongly that organic agriculture is the long-term solution to many problems of the world that they have little interest in 'fire-fighting' transient political and social problems. Most people, however, seem to feel certain only that organic husbandry is right in their own situation, and have no vision of what direction the rest of the world should take – particularly developing countries. A few, as described above, try to help by avoiding certain imports; some suggest that by using organic methods at least they are not "increasing the ecological burden for other people"; and a few fall back on the belief that technological advance will enable all countries to enjoy western standards of living in the future.

The lack of informed debate in this area is partly due to the fact that organic producers are typically preoccupied with practical matters and have only limited time to read up

about complex issues. The use of fossil fuel is easily identifiable as a problem, which is partly why it is mentioned by so many producers, but the social and cultural situations of other countries are much less easy to grasp than the bald reality of limited oil supplies. It is also relevant that development issues have not been high on the agenda of the Bristol organisations[1]. Although in recent years the organic movement has spread rapidly in some developing countries (Shepherd 1993), many British producers seem to have remained largely unaware of this unless the produce itself arrives in this country. Furthermore, when discussing imports people tend to get sidetracked by worries about the parity of standards, rather than being supportive of the initiative of farmers elsewhere – even if the products, like tea and coffee, are not competing with local produce.

Those producers who want to be in touch with development issues look beyond the organic movement for information, to mainstream media and magazines such as the *New Internationalist* and *Food Matters*. The latter is published by the *Farmers World Network* and aims to promote awareness in the UK farming community of the problems of developing countries; its approach to organic methods is pragmatic. Such literature can be a catalyst; one farmer, who claimed to have every copy of the *New Internationalist* apart from the first four, told me how concern about agriculture in developing countries eventually led him to convert:

> *I was always very suspicious of grand agricultural schemes in the Third World, which seemed to me littered with broken down machinery and broken hopes. So I was saying to myself: the best way to solve the world's hunger problems is to enable small farmers to grow food for themselves and perhaps a little surplus, rather than concentrating agriculture with grand high-technology schemes. And if that was a good thing for them, I decided it must be a good thing for us – Britain – as well. And my father was always a champion of small farmers – keep it local and understandable – and I think I've taken over that philosophy from him. So it was a sort of solidarity with peasant farming in other parts of the world.*

Soil and sustainability

Within the organic movement the least contentious reason for farming or growing organically is a concern for the soil; although this rates more highly with some people than others there is agreement that organic practices are beneficial[2]. Organic producers are often adamant that "soil is not just something to get the crops to stand up in", and some

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1 In the four years to the end of 1992 the *New Farmer & Grower* carried only five 'international reports', and the countries concerned were Australia, New Zealand, Israel, East Germany and Chile.

2 See Reganold et *al.* 1987, for a comparison of the effects of organic and conventional farming on soil erosion.

affirm that "each farmer should have a relationship with the soil", as a survey respondent put it.

As discussed in the previous section, many organic producers worry about the sustainability of using non-renewable resources such as fossil fuels – although without being able to suggest any complete answers. In some ways soil can also be regarded as a finite resource; certainly, there is only limited land surface on the globe, and if topsoil is lost from areas currently under cultivation it is difficult to reverse the process. However, while in a strict sense no use of fossil fuels is sustainable because they get 'used up', the case with soil is different because soil degradation and erosion are side effects of agriculture rather than being essential to the process.

Organic methods aim for sustainability[1], and producers do not take the soil they cultivate for granted; one farmer wrote that "soils are fragile and irreplaceable", and many wrote on the theme of wanting to "leave the soil in a healthy condition for the next generation". Some people can see surrounding farmland being eroded by wind and rain, but it is concerns even for those living in areas where it is not visible, as erosion is commonly regarded as the most blatant symptom of unsustainable farming practice. East Anglia is the favourite scapegoat within Britain but people also cite worldwide examples; one noted that Ethiopia's problems are partly a result of soil erosion, and several drew lessons from the American dust-bowl of the 1930s.

Conventional farming is regarded as 'mining' the soil, not only by laying land open to erosion, but by obtaining heavy yields through the use of NPK fertilizer – which stimulates growth but only provides three of the many nutrients which crops take up from the soil. One farmer explained that conventional crops are:

> *... hopelessly underpriced. Environmental aspects such as soil erosion don't come into the equation at all. It's only possible by exploiting the residual fertility of the soil. Organic farmers attempt to address all these things. Quite apart from the fact that very many farm businesses are not actually profitable at the moment, if you put in the real cost of production, the environmental cost – turn that into pounds per acre – they would all be bankrupt.*

[1] Even the most concise statements of organic aims enshrine the principle of sustainability: IFOAM *Basic Standards* include "to maintain and increase longterm fertility of soils" and "to work as much as possible within a closed system with regard to organic matter and nutrient elements" (IFOAM 1989: 4)

Organic producers are also very aware of the danger of soil compaction. Although to a large extent this is dependent on the soil type, some farmers who had converted their farms felt that the land had benefited because they did not have to do so many passes through crops with a tractor – as they were no longer spraying. An Oxfordshire farmer described how, when farming conventionally, he had started using tramlines, so that damage to the soil was at least limited to those lines; he is now looking forward to the day when his conversion is complete and the old tramlines no longer show up in the crops. More generally, organic producers argue that by returning plant and animal wastes to the soil they are building up the humus content, which improves soil structure and makes it less liable to compaction. Soil structure is also seen as the key to both drainage and the ability of soil to retain water. Although many organic horticulturalists use irrigation, some are convinced that their land is significantly more resistant to drought as a result of being organic. The last few summers have made this a relevant concern, and one farmer predicted that "if irrigation licenses are revoked in East Anglia [conventional farmers] will find that they don't have the soil structure to retain water any more".

Organic farmers are concerned that the dominant form of agriculture in this country uses the soil in unsustainable ways, even though the problems of erosion and degeneration of soil structure are less evident in Britain than in many parts of the world. As one farmer said explicitly, "the only reason why land in Britain is still fertile at all is because we are lucky with the types of soil and the climate – although we can't rely on that with climate change".

It is not only organic farmers and growers who feel a particular responsibility for the soil of the land they farm. Although agri-business seems to have abandoned the notion of stewardship altogether, many traditional farmers have not, and organic producers are often careful to point this out. Historically the concept of stewardship is not centred on trees and wildlife – which are not essential to farming, or on air and water – which pass through the farm and are affected by other people's activities, but on the soil. People argue in favour of organic methods on the grounds that as the whole system is geared towards "enriching rather than depleting the soil", there is no conflict between the demands of stewardship and of production – unlike the situation with conventional agriculture.

While the name of the Soil Association reflects the fundamental preoccupation of organic farmers and growers, the title of their magazine *The Living Earth* more specifically indicates the approach of viewing the soil as alive. Straightforwardly, this can be taken

to refer to the importance of earthworms and microorganisms within the soil – which, in organic systems, play a crucial role by breaking plant and animal wastes down into humus, improving the structural stability of soil, and increasing the availability of nutrients (Lampkin 1990: 24-7). In this context, one grower wrote of the satisfaction of "seeing our very sandy soil gradually becoming more full of life, both above and below ground". For some people, however, the idea of a living soil is more fundamental: soil can be seen as a living organism in itself, not merely a home for invertebrates and microorganisms. The soil, like a human body, is made of chemical constituents; to understand its functioning you not only have to know how these basic elements interrelate, but you must also regard the soil – like a person – as more than merely the sum of its parts. This idea is deeply ingrained in the philosophy of the organic movement in Britain; it is central to Lady Eve Balfour's landmark book *The Living Soil* (1943), but was also part of the thinking of Sir Albert Howard (1939) and indeed Rudolf Steiner (1924).

Organic producers range from seeing the concept of a 'living soil' as merely a useful analogy to accepting it as literal description. Their opinions are often betrayed by the words they use to describe the soil; some are happiest talking about fertility – the impersonal 'productive potential' – while others imply the existence of a living entity by referring to the 'health' of soils. A few people deliberately use the old-fashioned term 'heart' when they want to stress that the fertility of the soil is important for its own sake, and not just for instrumental reasons. A farm manager did this when he told me:

> *If we did for some financial reason have to go back to conventional farming – because that was the only way to survive – at least the land would all be in good heart. I hope I will have retired by then. I wouldn't want to do it, it would all seem a tremendous backward step to me.*

'Husbandry' is another traditional term which expresses the task of a farmer in a personal way. The Soil Association's first set of standards were titled *Organic Husbandry: Qualifying Standards*, and the concept of a living soil was introduced by the claim: "A complete, balanced and appropriate nutrition for plants... can only be provided by managing the soil as a whole living system". Moreover, in its early years the Soil Association magazine was called *Mother Earth*, a name which again has overtones of a personal, or even mystical, relationship between humans and the earth. Since the early 1980s the Soil Association has rather played down such associations, as part of their attempt to gain mainstream credibility for organic agriculture whilst OF&G, since its inception, has been businesslike rather than mystical in approach. However, the unwillingness to make 'unscientific' claims for organic methods in some respects obscures

the reality[1]. As Andrew Daw explains in the course of reviewing a book on bio-dynamic farming:

> In an effort to show that organic farming is not all 'muck and magic' there has been a tendency to quantify its constituent parts in scientific and economic terms. Naturally enough the organic farming movement wants to be respected and to argue from an equal starting place. There is however a problem; careful observation of what happens on an organic farm does not always match existing scientific models. For example, when soil analysis shows poor potash availability, but no potash deficient crops occur; or perhaps the experience of some organic farms that homoeopathic remedies work seemingly quite contrary to veterinary wisdom. (*New Farmer & Grower* 36: 31)

Despite research in Britain and abroad, particularly in Germany, it is clear that some aspects of organic agriculture, especially soil management, are perplexing even to eminent scientists: the US National Research Council produced a major report, *Alternative Agriculture* which, in a case study of an organic family farm, concludes rather lamely:

> How the Sprays manage to maintain an adequate pH balance and enough phosphorus and potassium in the soil – despite the fact that they have not added lime, phosphorus or potassium in 15 years – cannot readily be explained. (National Research Council 1989)

Although increased scientific understanding of how organic agriculture works undoubtedly aids the development of new techniques, and probably makes organic methods more acceptable to conventional farmers, once people actually start farming or growing organically they typically come to accept the principles behind it as 'making sense' even in the absence of scientific explanations. For instance, one farmer explained that he had stopped using turkey muck, not because it didn't do the job – since, as he said, "it is a superb muck" – and not just because of welfare considerations, but because:

> *It's almost too strong in a way. It's such a good muck that it probably distracts you from getting the basics right – you can get away with just slapping it on to provide fertility, rather than actually building the fertility as you should in an organic system. It allows you to shortcut, which is a good reason for not using it really.*

Although he had only recently begun to convert his land, this farmer had already begun to think in terms of building up the fertility of the soil, rather than just feeding crops by

[1] The bio-dynamic movement is not nearly so reticent in this respect, but their explanations are often incomprehensible without a thorough understanding of, and sympathy with, the philosophy.

substituting organically-approved fertilizers for conventional ones[1]. Indeed, for some people concern for the health of the soil is an overriding priority, and they object to the way that the Soil Association has broadened its remit over the years:

> *We weren't very far from Haughley, the experimental farm, and I knew Lady Eve very well. In the early stages the Soil Association was there to look after the soil and to see it through from the animal to man. That's what it was for; nothing else ever came into it. There's all sorts of things creeping in now, the philosophy of certain things; I don't know whether you can say about the trees and the hedges, I think that's up to individuals. You can give the bounds, of what's ideal, but I don't think you can lay anything down.*

Even among the younger generation of organic farmers there are people who will argue, for instance, that the health benefits of organic food are merely a bonus and a side-effect, while the really important issue is to look after the soil.

Health

My survey of organic producers shows 87% of them agreeing with the statement "Organic food is significantly healthier to eat than conventionally produced food". 7% disagreed with this, and the remaining 6% ticked the 'don't know' box. Organic food is viewed as healthier than conventional both because of what it does not contain – agrochemical residues – and because it is thought to be positively beneficial. Producers use phrases such as 'safe food' and 'chemical-free' or 'unpolluted' food to convey the former aspect, and words like 'wholesome' or even 'vibrant' and 'vital' to describe the latter. Some people are mainly concerned that food should be free of 'non-food' residues and remain unconvinced about the positive health claims. Others see the vitality of produce as an almost mystical property and regard the absence of agrochemicals as a prerequisite for healthy food rather than an assurance of it (Groh & McFadden 1990: 8-12).

In fact, organic methods cannot guarantee that food is free of agrochemical residues – pesticides can be carried by air or water, and even fertilisers can remain in the soil for longer than the two years minimum conversion period. However, since chemicals are not deliberately applied to organic crops, eating organic can be considered the best way to

[1] Several of my interviewees were, or had been, using turkey muck with the knowledge of the Soil Association. However, standards about the ethical acceptability of manures are being enforced increasingly strictly and few are now able to get dispensation to use turkey manure from intensive systems.

avoid consuming them. One woman who had an organic stock enterprise on her husband's conventional farm told me:

> *I get really annoyed with Jonathon, because he goes and sprays his onions and potatoes and everything. The thing is, we've got to eat it. I don't like eating Jonathon's onions raw in salads, because I know what he's put on them, so [whispered] I go out and buy organic onions in from town, because I refuse to eat his in salads. I don't mind cooking them, I seem to think that perhaps dispels stuff, because his argument is that it's only in the ground and it's not actually... oh I don't know, a lot of arguments he's got.*

Although this woman's family situation precluded her from using only organic produce, she was concerned about agrochemical contamination. She objected to using her husband's onions because she knew what had gone onto them: it was the certainty that those onions had been sprayed which stimulated her to buy organic, despite the fact that they had piles of unsold conventional ones in the farmyard. When she cooked with onions she used their own – hoping, with little justification, that the chemicals would be dispelled. In fact, she usually bought conventional vegetables rather than organic; her behaviour may seem illogical but it is an illustration of how people's *perception* of risk influences their behaviour.

Organic meat is also perceived to be less hazardous than conventional because there are restrictions on the use of prophylactic medications and growth promoters which might leave residues in the meat. The emergence of BSE as a problem in the late 1980s heightened public awareness of dangers to human health presented by modern methods of rearing livestock, and consequently raised the profile of organic meat. Those organic producers strongly motivated by their perception of the health risk of agrochemicals or veterinary medicines tend to think that conventional food is simply unsafe, and that there is no acceptable level for such substances in food. Their explanations for an involvement in organic farming or growing are along the lines of aiming "to grow and sell healthy, safe produce" or "to produce veg and meat that I *know* are totally safe for myself and family to eat".

Some of these people have made an association between the additives used in food *processing* and the agrochemicals commonly used in food *production*. They see such recent additions to the human diet as being consumed not because of supposed nutritional benefit, but because they contribute to the efficiency of the food-supply industry. There is a prejudice against 'E-numbers' – the chemicals added to food during processing. Some of these are known to be benign but the codes used to identify them are difficult to remember so people often resort to boycotting them all.

This prejudice is often extended to the chemicals used in growing food. One woman used the story of her niece's hyperactivity, which had been diagnosed as a sensitivity to food colourings. This was her reason for giving children organic food rather than just avoiding products containing all or some processing additives. This may appear extremist, but it arises out of an overall distrust of the food industry's use of technological innovations – including, indeed, not only agrochemicals and food additives but also irradiation and the use of genetically engineered products. It is very difficult to prove that eating food treated with a particular agrochemical has an adverse effect on human health, because consumers have no way of knowing which ones have been used on the foods they buy. Food additives, on the other hand, have to be listed as ingredients, and the fact that some people have been discovered to be allergic to additives such as tartrazine is commonly taken as an indicator that traces of other synthetic chemicals are also likely to be harmful. For some people there comes a point when all chemical inputs into food, whether during processing or production, are considered guilty until proven innocent. Obviously, not all these people become organic producers, but some producers do cite it as a motivating factor.

A similar association of ideas can happen when people are primarily motivated by concern about the possible side-effects of modern medicines. Some organic producers worry about particular medical compounds like antibiotics and vaccines (Trattler 1987: 7). Others simply avoid conventional medicine altogether:

> *I never use conventional medicines, and that means never. I haven't got an aspirin in the house, I wouldn't dream of having one. I wouldn't dream of taking Paracetamol, I don't take anything which I was told I should take for having high blood pressure, and I can't think of a time when I last took a pill of any sort. I think it must have been when I had a poisoned hand, which is probably thirty years ago. I don't think I'm doing badly on it.*

Another producer summed up her feelings by saying that she was "more afraid of medicines than of being ill". The presumption is that modern medicines, despite their superficial efficacy, undermine people's natural state of health. There are doubtless many people who avoid conventional treatments whilst not eating organic food. However, the producers who expressed such feelings about medicines (which, after all, are intended to promote health) often see the equally complex synthetic chemicals like pesticides (which are designed as poisons) as representing an even greater threat to health.

I also talked to organic producers who had direct experience of maladies which conventional doctors were unable to cure, but which cleared up after they used 'natural' or herbal remedies or were treated by alternative practitioners. For instance, the wife of one farmer ate garlic and honey to control her asthma – which had previously been so acute

that doctors had resorted to intravenous cortizone. Such evidence that conventional experts do not always know best gives people reason to question medical judgement on other issues, such as the safety of agrochemical residues.

A few organic producers have been influenced by therapists who have advised a change to organic food as part of a dietary programme. In particular, naturopaths (nature-cure practitioners) have been advocating organic diets for decades[1]. Two of my interviewees said that witnessing successful alternative treatments which involved organic diets had been the catalyst to becoming organic producers. Both cures were dramatic: one a naturopathic treatment for asthma; the other involving osteopathy and diet for the treatment of epilepsy.

In naturopathy organic food is valued not only because it is unpolluted – it carries a smaller burden of agrochemicals which might cause or aggravate an illness – but also because it is seen as nutritionally superior to conventional food:

> Naturopaths... feel strongly that the average diet no longer supplies these needed elements in sufficient quantities for several reasons. Our foods are now grown on soils depleted by years of intensive farming, without proper understanding of organic principles of land use and ecology. Essential minerals such as zinc are already deficient in the soil of many states. Even if the food eaten looks nutritious it no longer supplies the same proportion of minerals that food 100 years ago provided. (Trattler 1987: 31)

In the literature of the organic movement, there is discussion and reports of research about the nutritional qualities of organic food. Organic fruit and vegetables in particular are claimed to be more nutritious than those grown conventionally because they have a higher dry matter content, more trace elements and vitamins – particularly vitamin C – and less nitrate (Lampkin 1990: 568-9). However, when producers talk about the positive health-giving attributes of organic food, rather than it just being chemical-free, they tend not to refer to the scientific studies. Instead of arguing points of detail, they explain in terms of common-sense or belief that because the methods used are more 'natural' or 'traditional' organic food will inevitably be healthier to eat – if only because the human species has had generations to adapt to it.

The freshness of fruit and vegetable crops is also considered important. Vegetable producers value the fact that they and their families have access to produce that is fresh

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[1] Interviewees mentioned that an organic diet had been recommended to some of their customers by homoeopaths or by the Bristol Cancer Help Centre.

as well as being organically produced, and they report that customers to farm shops are often drawn by the prospect of fresh vegetables rather than by their organic status.

Freshness is a straightforward quality, but some producers also refer to concepts of vitality or life-force which go considerably beyond it. When they use such terms they generally don't attempt to explain or justify them. Instead, they simply use them in context, saying things like "the fruit and veg are going to lose their life-force gradually if they are transported". In fact, a common trick is for people to talk about concepts such as life-force matter-of-factly, and then note their listener's reaction as a way of discovering whether or not they are on the same wavelength. If someone accepts the term when it is used in a matter of fact way there is no need to explain it, and if they do not, it is generally left for experience or intuition to convince them, rather than attempting persuasion. The word 'vitality' was used extensively by Lady Eve Balfour, and 'life-force' is an important concept among bio-dynamic producers. Both are mainly talked of in the context of fresh vegetables and fruit rather than grains or meat. The vitality of milk products is an issue, but the difference between raw and pasteurised milk is discussed more than the specific qualities of organic milk[1].

There has been some research, notably by Vogtmann and his colleagues, which has investigated ways of measuring those qualitative differences between organic and conventional foods which are not accounted for by their chemical make-up (Lampkin 1990: 571). The methods are scientifically unorthodox and therefore the studies may not convince cynics, but they hold a fascination for people who already believe in the existence of life-force energy and want to understand more about the forms it takes. Judging from my interviews people who are aware of vital qualities in food are, unsurprisingly, particularly committed purchasers of organic or bio-dynamic goods.

Organic produce is often held to be more flavoursome: one person wrote emphatically on the survey: "organic food tastes totally different from conventional grown food, which has no taste", and many others mentioned that part of their aim was to produce food which tasted good. An interviewee recounted how her children, who ate all sorts of raw food at home, refused salad at school because it tasted of nothing but mayonnaise. Flavour differences are mainly an issue with fruit and vegetable produce, and sometimes meat; people seem to be less aware of the flavour of grain crops and dairy produce. A few producers are wary of claiming that there are any consistent differences in taste, while

1 See *Living Earth* 167: 22-3.

others regard the tastiness of organic food as one aspect of its superior quality without claiming that it affects physical health. However, some producers think that, aside from the nutritional benefits of organic food, the superior flavour can promote physical health by contributing to the eater's sense of well-being. Such people are thinking in ways which avoid making boundaries between the physical, mental and spiritual aspects of a person. This perspective allows all sorts of connections: one farmer wrote that they wanted "to produce food that is healthy for others to eat, which in turn will help people to think clearly", and by implication this meant to think about treating the earth with respect. Another wrote that they were concerned about the "degeneration of will forces of society due to 'gutless' food".

Despite the high level of awareness of organic food as healthier, at least in the sense of being unpolluted, when I asked people in the interviews whether they ate organic produce, it transpired that although they generally ate some of what they themselves produced, many did not purchase organic food. Sometimes they claimed that availability was a problem, and indeed many live in rural areas where local shops do not sell organic goods. Another factor that people mentioned is the expense; some earn so little from farming or growing that they feel that they cannot afford to buy organic. Some are selective in their price-sensitivity: they are willing to pay organic premiums when buying direct from other producers or from wholefood shops but object to contributing to the profits of supermarkets. And some households do not eat organic produce simply because there is a division of responsibility such that the person who took the initiative to start farming or growing organically does not do the shopping and therefore has little influence on what is purchased. Livestock farmers can sometimes find it difficult to retrieve the carcasses of their own animals once they are sent to the abattoir and, technically, there are tax problems about doing so.

Many producers, despite considering organic food healthier, do not make much effort to obtain it, because they feel that their lifestyle is already reasonably healthy. This is sometimes the case with farmers who have converted from conventional to organic methods and who are aware that they have thereby drastically reduced their own exposure to agrochemicals on the farm – and indeed that of their family and employees. The attitude is that the effect of any residues they consume in food would be insignificant in comparison to what they have already absorbed in handling such chemicals, although accepting that other people may find eating organic food beneficial if they are hypersensitive or allergic. Market gardeners also sometimes expressed the opinion that, since they were working outside in a healthy environment and eating a lot of their own

organic produce, making an effort to buy organic goods was not worth the bother or expense. If they did buy organic it tended to be basic foodstuffs like flour or other grains, rather than things like imported fruits which were only eaten as occasional treats and where the organic premium is higher.

When I asked people about health, their focus often shifted from the health of humans to that of the soil, or into discussions of organically grown plants and animals as healthy organisms – rather than as potentially health-giving food. Organic philosophy talks of the health of soil, plant, animal and man; and of the way in which the health of the whole system is interdependent. Some producers do themselves think in these terms; however in practice, at the level of a farm or holding, humans are not fully integrated into the system. Ideally all waste products should be returned to the farm, including human sewage, and people should eat what is produced on that land. In fact organic producers all buy in some food, but this food only affects the humans who consume it – because sewage is not returned to the land. The soil, the plants, and the stock on the holding are not affected by whether the food eaten by the human inhabitants is organic or conventional. For some producers, therefore, to spend money on buying organic food, even if they do believe it to be healthier, is less important than getting things right on the farm or garden, although a few may still buy it as a gesture of solidarity with the movement.

Indeed, it is quite common for organic producers to disparage people who buy organic food out of a concern for human health, as they consider this motivation to be fundamentally selfish. Those with farm shops are sometimes irritated by customers who are unaware of the environmental rationale for organic production. One farmer told me of his indignation when a regular customer suggested that the village green should be sprayed with herbicide to keep down the dandelions: she had unintentionally revealed that her enthusiasm for his organic vegetables was a purely selfish regard for their taste. The situation was further complicated because she was the chair of the local 'Tory' party while he was a self-professed 'Red'. He had been willing enough to sell vegetables to her on the basis that the transaction was benefiting the land – "the good food is a side-product" – and was disconcerted to discover that in her eyes he was merely providing a service to her as a customer. They did not, after all, share the common goal of wanting to benefit the environment.

Animal welfare

Animal welfare is a complicated issue for the organic movement, because in some situations the interests of animals appear to be compromised as a result of adherence to organic

standards, and also because people have different feelings about what is acceptable in the treatment of stock. Additionally, many growers do not have animals and are therefore only involved in welfare issues at one remove – when buying in manure – and people on mixed farms often grow organic cereals but keep their stock conventionally. There are also a few people in the organic world, as in the general population, who think that killing animals for meat is wrong, regardless of the way in which they have been reared.

When they talk about the welfare of livestock, organic producers tend to compare their own perceptions of what is appropriate with what is laid down in organic standards. In this context, the most important set of standards are the Soil Association's; UKROFS standards have drawn heavily on these, and the EC regulation simply postponed making any proposals to govern organic animal production. OF&G, prior to the advent of UKROFS, was mainly concerned with cereal and vegetable production and members with livestock were encouraged to produce to the Pure Meat Association grade, which is additive-free, but not organic.

The production of organic meat has lagged behind cereals and vegetables, and this can partly be attributed to the technicalities of conversion. Although recently a fair number of upland farms have been licensed to raise organic stock on permanent pasture, previously most organic farms have been mixed: rotating arable crops with temporary leys grazed by stock or conserved for winter feed. When farms are converted to a mixed organic system it is preferable to convert each field by putting it down to a grass-clover ley, as this builds up fertility before the soil is required to produce an arable crop. It is usual to stagger the conversion of fields to avoid all of the farm being under grass at once, and this means that despite each field only requiring two years for conversion, the whole process is strung out over much longer. It is not until the first fields have gone through a full rotation of perhaps six or eight years, and are put down to a ley again, that there is any organic grazing or the potential to make organic hay and silage. And even then, if the farmer was cautious about converting in the first years, there may not be enough organic land to maintain the clean grazing system which is essential for organic sheep husbandry. As a result of all this, although the number of farmers registered as having at least some organic land increased markedly during the late eighties, there has been a time-lag in meat production: they have been producing substantial quantities of cereals for some time before beginning to convert their stock.

Paralleling this lower production, organic meat has been much less visible to consumers than cereal products, fruit and vegetables, although organic dairy produce – particularly

yogurt and cheese – has been widely distributed in small quantities by a few producers who do their own processing and marketing. Even now, although several supermarket chains buy organic meat, it is stocked in fewer of their stores than organic vegetables. It is also unusual to find meat in wholefood shops because of their vegetarian bias, although these are a major outlet for other organic foods.

In responding to the survey, several people mentioned keeping animals in a 'natural', 'stress-free' or 'loving' environment as a major reason for farming organically. One wrote that they wanted to "see animals in natural life, contented and peaceful in their surroundings", and another wrote:

> *I dislike... sow tethering and stalls, battery units, and cubicles yards and parlours – in all three cases putting the animals under strain living in completely unnatural conditions.*

Indeed, most organic producers are agreed that the 'factory farming' of livestock and poultry is unacceptable, and it is therefore unusual to find such enterprises on farms which are even partly organic. However, it is not unheard of, and one of my interviewees – who was meticulous in the care of her organic stock, gave them names, and cried when they went to market – was nevertheless resigned to the financial expediency of renting out some spare farm buildings to an intensive pig-farmer. More common is the situation of an organic farm with free-range, but not organic, chickens or pigs. The rationale is that chickens and pigs do not graze substantially, so feeding them organically would mean a big input of premium-priced cereals – which consumers would not be prepared to pay for. And also, as one interviewee explained, his customers were so focussed on the welfare problems of battery farming that, having made the effort to buy free-range eggs, they rarely asked whether the hens were fed organically – although they did occasionally enquire about hormones.

The Soil Association's Standards for livestock husbandry state that "the general conduct of animal husbandry should be governed largely by physiological and ethical considerations, having regard to behavioural patterns and the basic needs of animals" (Soil Association 1992a: 5.402). The Standards elaborate this with specific recommendations about issues which are generally understood to be part of animal welfare, such as housing density and ventilation. The recommendations could, given the will, be achieved with conventional stock. However, the veterinary section of the Standards restricts the use of many prophylactic and curative veterinary products to an extent which could not be recommended for conventional animals – the principle is that organic management practices and feeding are "designed to encourage positive and

dynamic animal health and vitality, thereby promoting greater resistance to disease" (Soil Association 1992a: 5.101, see also 5.701). This is supported by the experience of some farmers:

> *It's interesting, the animals here: without fertilizers it appears there is a definite change in temperament, they are a lot quieter and more laid back. The other factor is compared with normal years we've had no foot trouble with cows. This time of year normally you get a load of foot trouble – in late winter – because of the nitrogen and the high protein and this that and the other. This year we haven't had any virtually at all.*

The Standards assume that avoiding veterinary products where possible makes a crucial contribution to 'positive health'. Indeed, as mentioned above in the discussion of health, some producers avoid taking conventional medicines for the same reason. However, it is common for people to feel justified in taking this sort of risk for themselves but not for their stock; moreover, not all of the producers who are trying to adhere to the veterinary standards are convinced even about the principle. Some producers see the Soil Association's aim of avoiding veterinary products as a response to consumer demand for 'pure' meat, rather than something with potential benefit for the animals. Typically, such people agree that production-promoting hormones such as BST should not be permitted, but want to continue the use of antibiotics, vaccines and worm drenches.

Many organic farmers have experienced conflicts between the requirements of organic standards and their own perception of what is best for their animals. One farmer told me how he once had major problems with fly strike, and had even lost some lambs because of it. The Soil Association advice at that time was to do visual inspections and treat affected animals individually and so he inspected them twice a day but the strike was often far advanced by the time it became visible. Difficulties such as this have resulted in revision of the standards, and various products are now permitted for the treatment of fly strike. Nevertheless, among some farmers organic veterinary standards still have a reputation for being restrictive to the point of compromising animal welfare (*New Farmer and Grower* 32: 25-26). In fact, the Soil Association has for some time made it clear that it expects farmers to use conventional treatments if they are needed to save the life of an animal or to prevent unnecessary suffering, and the 1992 revision of the standards made it easier for farmers to make such decisions by relaxing the requirements on withdrawal periods – the time after administering a restricted veterinary treatment

during which the products of an animal are not classed as organic[1]. The Soil Association has become increasingly prepared to permit certain treatments if there is a 'known farm problem', although farmers themselves vary enormously in how hard they are prepared to push for such exceptions. In 1993 the Soil Association responded to attacks on its welfare policies by launching an Animal Welfare Campaign and using the slogan: "Breaking the Circle of Suffering... the Soil Association's best-kept secret" (Soil Association 1993a).

Farmers also differ in their attitudes to homoeopathic remedies. These are widely used on organic stock, and some people find that for particular ailments they are effective enough to replace conventional veterinary products – one farmer said that as a result of converting his dairy herd to organic and using homoeopathy he had cut his bill for veterinary medicines by 90%. On two farms I met shepherds who had begun to use homoeopathy because their employers had decided that the sheep should be run organically. Neither of them initially believed that homoeopathy would have any effect, but both had become firmly convinced that certain nozodes did work. One shepherd now relies on homoeopathy to prevent footrot; the other uses it for watery mouth in lambs. The effective use of homoeopathy can help people to avoid using conventional veterinary products without compromising animal welfare. One bonus of using homoeopathy often mentioned by farmers and stockmen is that the job of looking after the stock becomes more interesting and empowering – because they are involved in diagnosing animals and monitoring the effects of remedies and are thus using traditional husbandry skills rather than simply relying on the expertise of a vet. However, some people have had unsatisfactory experiences with homoeopathy, or do not have sufficient faith to try it.

Another area where organic standards can be seen as coming into conflict with welfare considerations is the requirement that organic livestock must be slaughtered at abattoirs which have been inspected and licensed by the Soil Association or another organisation approved by UKROFS. Although farmers are sometimes prepared to bear the cost, not all abattoirs want to be inspected by organic authorities just for the sake of a few local organic farmers. This, along with the fact that there are relatively few co-ops and businesses which market organic meat, usually means that organic animals are transported longer

[1] In section 3.38 of the 1989 *Soil Association Standards* withdrawal periods are stated as "two weeks or seven times the manufacturer's recommendations, whichever is the longer". In the 1992 version, section 5.744, withdrawal times are "at least double those defined by the licence or the prescribing veterinarian and shall not be less than 14 days or three times the recommended period whichever is the longer". The logic of the latter statement is obscure, but it is clearly a relaxation of the previous position. It is also noteworthy that the more recent Standards avoid the use of the provocative word 'drugs' when referring to veterinary treatments.

distances to slaughter than they would be if they were being sold conventionally. One farmer expressed the opinion of many livestock producers when he told me:

> *I don't like sending my livestock a long way in a lorry to be slaughtered, I think it is against the principle of organic farming. Fair enough we have to kill our livestock, but I think they ought to have as free a life as possible up to slaughter and when slaughter does come it should be very rapid, and it should be on the farm – that is my personal opinion. They shouldn't have to spend several hours in stress in a lorry and perhaps wait in a layerage pen for another two hours before they're slaughtered. I'm totally opposed to that, but if you sell to a co-operative you have to accept these things and in the interim I think my pride will have to back down.*

Mobile abattoirs have been presented as a solution to this difficulty, but although the idea is supported in principle by the Soil Association and it is often mentioned by farmers there are none actually in operation.

The debate about animal welfare works both ways; there are practices which the standards prohibit specifically because they are regarded as cruel, but which some organic farmers see as routine, traditional, and acceptable. An example of this is the 'mutilation' of animals' ears for the purposes of identification, which was prohibited in the 1989 version of the Soil Association Standards (1989: 3.9). By 1992 the practice was termed 'ear notching', and was permitted (Soil Association 1992a: 5.410). Welsh farmers had argued that tagging and tattooing were not sufficiently permanent and went contrary to local practice. Although the Soil Association have proved flexible about this and similar issues, some farmers express resentment that there was ever an attempt to enforce such requirements – and assume, wrongly, that there are no farmers represented on the committee which formulates the standards. Underlying this complaint is a feeling that, whatever the situation with intensive livestock enterprises, traditional stock farmers have a practical understanding of welfare issues which is realistic and appropriate. As one farmer said:

> *I'm not an animal liberationist. I think people credit animals with more feeling and thought and imagination than they possibly do possess. This thing of being cruel to animals – if an animal is literally suffering then it doesn't get fat or thrive. I'm not saying it wouldn't be happier if it was living in a different environment, but to say that it is actually suffering I think is usually an exaggeration.*

Later on this farmer objected to specialisation in conventional farming on the grounds that "stockless farms are soulless places, soulless", and explained: "I know I crack on about them being a lot of bother and all that, but without them I think farming's unreal". The relationship of such farmers with their animals is so personal that it is difficult for them

to accept any criticism of their husbandry methods from outsiders – which includes the Soil Association.

One facet of the debate about animal welfare which has been a considerable issue within the organic movement is that of 'ethical' manures. In order to replace some of the nutrients which leave the farm when produce is sold, organic producers are permitted to buy in certain mineral fertilizers, as well as seaweed and materials for composting. In an ideal world, human sewage would also be returned to the soil, so that nutrients were cycled back from the consumers of the produce. However, human sewage is currently mixed with industrial waste, and fears about the resulting heavy metal contamination have caused it to be banned on organic farms. Consequently, some organic producers, particularly market gardeners who have no livestock, bring in farmyard manure in order to maintain the fertility of their land. As they cannot be expected to rely on obtaining organic manure (as organic farms use all that they produce) they are often given permission to use manure from conventional sources. However, both Soil Association and UKROFS standards insist that manure can only be used if the husbandry of the animals which produced it satisfies certain welfare criteria. The aim is to avoid abetting intensive livestock systems by providing a route for the disposal of waste. While most organic producers agree with this in principle, some are growing in areas where all stock is kept intensively, and argue that it is better to use local manure, even from intensive systems, than to incur the financial and environmental costs of transporting manure across the country (*New Farmer and Grower* 26: 12).

Elm Farm has initiated a project to research the feasibility of organic systems which do not rely on manurial inputs from either human or animal sources. These 'stockless systems' replace leys grazed by animals with green manure crops which are cut and allowed to decompose on the field in order to build up soil fertility. If the results of the research are positive, it may encourage some farmers to convert, particularly those who had previously been daunted by the prospect of introducing stock onto a farm lacking the appropriate infrastructure. However, existing organic farmers appear to have limited enthusiasm for the idea, either simply because they like keeping livestock or because they think that there are insurmountable problems such as weed control and the lack of income from land under green manure.

There are, in addition, a few growers who are experimenting with veganic (vegan-organic) methods on a small scale, because of ethical objections to exploiting animals in any way –

even to the extent of using manures from animals kept to organic welfare standards[1]. The Vegetarian Society approves of these developments and states that:

> ... we support the growing interest in organic farming and other sustainable agricultural systems. We believe in an organic agricultural system without livestock that does not involve the input of animal products... (Vegetarian Society 1992)

This quote is taken from literature circulated as part of an attempt to launch a Vegetarian Agricultural Project. The project foundered due to lack of funds, but also because of a fundamental discrepancy of aims. The Vegetarian Society intended to run a campaign to promote farming systems which avoid exploiting animals, and had identified organic methods as at least incorporating standards on animal welfare. However, they underestimated the extent to which commercial organic systems are at present even more dependent on animal inputs than conventional farms, and failed to understand that most organic farmers regard mixed farming as the ideal. As Colin Spedding, now Chairman of the board of UKROFS, put it: "Vegetarians wish to exclude animals from agriculture (or at least their products), whereas organic farmers regard farm animals as essential components of the production system" (Spedding 1990: 231).

"It's not a way of life..."

> The fourth misconception is that organic farming requires a change of lifestyle on the part of the farmer. While it is true that organic agriculture has been passionately supported by people with radical views on other issues and by those holding minority opinions about such things as nutrition, it has never been the case that organic farmers are either part of the love and magic, beard and sandals brigade, or that they are excessively puritan. Such cheap jibes have been the stock in trade of agricultural commentators unable to face up to the real issues generated by the growth of interest in organic food and organic farming. They ceased to be funny a long time ago, are now merely tiresome and just will not do as a substitute for genuine discussion and debate. (Lampkin 1990: 3)

There are indeed many organic farmers, and growers, who object to being stereotyped in this way. One farmer's wife reported how people were surprised to find that she was 'normal' – she went hunting and enjoyed foreign holidays – despite the fact that the farm was fully organic. A grower complained that some of her customers wouldn't accept that

[1] For further information about this viewpoint see Jannaway (undated).

meat could be organic and were shocked that she indulged her children's preference for white bread. She was irritated that:

> *Being organic, or buying organic things seems to go together with being vegetarian, being anti-nuclear and green on every front. If you're one you're expected to be the other. If people buy organic they may feel that they're automatically lumped in with this other set of values which they quite often don't share. There are people who wouldn't go into [the local wholefood shop]; they might want to buy the produce, but they won't go in because it's a whole scene which they don't want to be involved in. That's where supermarkets help – you can buy organic and be anonymous.*

This grower spoke for many people in saying that organic was "just one ideal, not a governing effect on everything else"; and producers often object to aspects of the standards on the grounds that the concept of organic is being stretched too far[1]. On this view, organic farming and growing is simply a matter of agricultural practice, and is emphatically not a way of life.

[1] Soil Association's involvement with setting up a system to certify sustainable production systems for tropical hardwoods is, for some people, a prime example of the organisation going well beyond its remit.

6

BEING 'REALLY ORGANIC'

6

BEING 'REALLY ORGANIC'

"... it has to be a way of life"

> *Organic is changing your whole way of life; for the thing to succeed it has to be a way of life.*

While people like those quoted in the conclusion of the previous chapter argue that it is sheer prejudice or stereotyping to assume that people will live differently because they farm or grow organically, others emphatically maintain that being 'really organic' is a matter of lifestyle as well as agricultural practice. One grower wrote:

> *To us, growing food which is fit for consumption and keeps you fit and healthy is the only way. But also, our whole lifestyle is 'organic'. It's not just growing vegetables, it's a sound way to live... a good simple life.*

And another that:

> *Life is a 'whole' thing. 'Organic' is, I believe, a very sympathetic piece in that, but I don't believe that the farm or society stop at either side of the farm-gate.*

Individuals are usually clear about whether or not they consider themselves 'really organic' but it cannot always be inferred from their lifestyles – because of the great variation in social expectations, in 'pre-organic' lifestyles (ranging from people who have moved to the country in order to 'be organic' to those who were involved in farming before beginning to adopt organic ideals), and indeed in the extent to which people manage to live up to their ideals. In the context of this study people are deemed 'really organic' if they take the ethical content of organic standards to heart rather than seeing them as a rule-book; the difference is as much in approach as in results, so both intentions and actions are relevant. This sort of distinction is familiar and widely accepted within the organic movement; for instance a 1993 article on the Irish organic movement identified some producers as 'real alternative types', jokingly suggested the acronym RATS, and described them as having set out "to build a convivial life at a personal and local level, a life fertile and full of meaning" (*New Farmer & Grower* 38: 13). Fischer, in the conclusion to his study of German-Swiss organic producers, says that they "frequently stated that a 'real' farmer should see his occupation more as a vocation, rather than as a job for earning a living, and should feel responsible towards nature and humanity" (1982: 242)[1]. The concept of 'really organic' producers developed in this chapter embraces both those people who have moved to the country in order to 'be organic' and those who were involved in farming before beginning to use organic methods.

In the previous chapter a network of concerns was divided into five 'concern issues'; any one of which can be sufficient to motivate people to begin organic production. The 'concern-issues' are not necessarily adopted by producers for ethical reasons; the basis can be prudence (soil sustainability, health and, on a less individualistic level, global sustainability) or sentimentality (local environment and wildlife, animal welfare). In contrast, this chapter will focus on those people who are thinking in a way which is 'organic' in the sense of being holistic. They may not feel that the 'concern-issues' are all of equal importance, or agree about the best way of solving the problems, but they tend to accept them all as ethically relevant. Their approach to the 'concern-issues' is ethical – and not just in human terms: these 'really organic' people commonly claim that non-human goals should stand alongside human ones.

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[1] It is also revealing to compare Fischer's distinction, between the external and internal factors which lead people to convert, with my division, between people who simply farm or grow organically and those who seek to be 'really organic'. People who just farm or grow organically tend to be motivated by what Fischer calls external factors: "negative experiences in applying conventional methods, diseases in humans and animals on the farm, contacts with organic farmers doing well", while 'really organic' people are additionally, and more fundamentally, motivated by internal factors: "psychological predisposition, or the search for a new way of life" (Fischer 1982: 242).

In this chapter I will first look at the process by which people become 'converted' to thinking and acting in a 'really organic' way. I will then consider what being 'really organic' means to people both philosophically and on a personal level – particularly in their relationship to nature and their desire to find a more 'integrated' way of living in reaction to the experience of alienation. The next section, *Living Well*, charts the changes in lifestyle that people make because of choosing to live by the spirit of organic standards rather than just applying them to agricultural practice. Living organically in this way can be purely a matter of personal integrity, but many organic producers also want to influence other people; the ways in which they do so are considered in *Sowing Seeds of Change* and also in the following section on marketing – which is an unavoidable interface with people who do not necessarily share 'organic' values.

Some of the specific values or ideals mentioned in this chapter also have force for organic farmers and growers who are not 'converted' to being 'really organic', and indeed for people who are not organic producers at all. For instance, encouraging local consumption of locally produced food is commonly thought to be a desirable goal, especially within the 'green' movement. However, the way in which 'really organic' producers justify their ideas and integrate them into their lives are are of particular interest because these people are developing value-systems in a practical context rather than in abstract. Not only are they involved in food production, which is vital to human survival, but they are also constantly interacting with the natural world. Moreover, there is often an explicit hope that the microcosm of an organic farm or garden may help to provide models for responsible human interaction with the natural world on a larger scale.

The Conversion of Farmers and Growers

Land which is to be used for organic production has to undergo a two-year 'conversion' period, during which time any produce cannot be sold as organic but management of the land must comply with organic standards. However, within the organic movement the conversion of land is a much more complex concept than this would suggest. For instance, it is regarded as unwise to convert a whole farm at once, and it can take as long as a decade to convert a farm by bringing land into an organic rotation one section at a time. The two-year period is designed to ensure that chemical residues are not present in crops and is no guarantee that soil fertility and crop production will be optimized so rapidly. Prior to 1993 there were also substantial differences in the organic standards of licensing organisations. Some farmers were attracted to OF&G because it gave them more freedom,

as well as linking them into a marketing system, while others chose to accept the more exacting standards of the Soil Association because they believed in the principles behind them or felt that the symbol was most widely recognised.

Although official standards have differed in their requirements, and the conversion of a farm can be a long drawn-out process, there is agreement among those who are committed to organic production that the word 'conversion' is appropriate: changing from conventional to organic husbandry relies on a different sort of system coming into play; it is fundamentally different from merely using lower applications of agrochemicals. The theory is that in a balanced organic system soil and crops are innately healthy – and this can be undermined by even occasional use of pesticides or synthetic fertilizers.

Stuart Hill, director of *Ecological Agriculture Projects* at McGill University in Canada, characterises three overlapping stages in the evolution of sustainable practices on a farm scale: efficiency, substitution and redesign:

> In the efficiency stage, conventional systems are altered to reduce both consumption of resources and environmental impact (e.g., banding fertilizers, monitoring pests, optimal siting and timing of operations). In the substitution phase, finite and environmentally disruptive products are replaced by those that are more environmentally benign (e.g., synthetic nitrogen fertilizers by organic sources, non-specific pesticides by biological controls, herbicides by appropriate systems of cultivation). Because neither of these strategies confronts the causes of problems, they condemn producers to repeated reliance on externally derived curative solutions and inputs.
>
> In contrast, the redesign stage aims to avoid problems by site and time-specific design and management approaches. The farm is made more ecologically and economically diverse, resource self-reliant and self-regulating. Problems are solved at the causal level by building self-regulating mechanisms into the structure and functioning of the agroecosystem. (Hill 1991: 219)

This is worth quoting at length, because it gives support, from another continent, to the distinction I have made between farming and growing organically and being 'really organic'[1]; the former are 'substituting', the latter are aware of the necessity to 'redesign'. It is also relevant because one of Hill's central tenets, cited in the *Ecological Agriculture Projects* leaflet, is that:

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[1] I only met Dr Hill and became aware of his work at a late stage in my research. Although his conclusions parallel my own, his analytical approach is entirely different: he is primarily concerned with the psychosocial behaviour of farmers. For example, he develops at length the argument that "the common obsession with the elimination of enemies, including insect pests, may have their roots in the over control and manipulation of children and their treatment in some families as "pests"." (Hill 1992: 1)

> To bring about change on the planet, on the farm and in the forest, we need to have organizational transformation, but for that to happen, everyone of us has to change. We have to undergo a personal transformation. (Ecological Agriculture Projects, undated)

Indeed, interwoven with attitudes towards the technical aspects of converting land are ideas about the attitudes of the farmers or growers themselves. A grower I interviewed described producing to OF&G standards (prior to changes made because of UKROFS) as being "like riding a motor-bike with L-plates': you could go on doing it indefinitely but it showed that you hadn't made a real commitment". Similar reservations are expressed about farmers who convert only part of their land. There are a few 'road to Damascus converts', as one farmer in the survey described himself, writing "I have spent most of my life farming the wrong way, and have experienced some of the damage this can cause to land and stock, I now wish to help redress the situation". For most people the change is gradual, but with, at least in retrospect, certain turning points.

'Really organic' producers are committed to more than the agricultural methods; they have undergone a personal 'conversion' and apply organic principles in the way they live. The word conversion is generally accepted by these people, because they recognise a difference between mere rational acceptance of organic principles and internalising them so that they become part of a person's identity. Some organic producers become converted in this latter sense through beginning to apply the underlying philosophy behind the organic agricultural practices to the rest of their lives. Other people are effectively 'organic' in thinking and lifestyle before ever becoming farmers or growers. The personal nature of conversion was highlighted in interviews and study visits where it was the cause of marital or family conflict: if someone chooses to be 'really organic' that is a change in who they are, and this can be much more difficult for other family members to accept than a mere change of agricultural technique.

Relationship with Nature

> To live physically Man must respect the Earth
> To live socially Man must respect his Neighbour
> To live spiritually Man must respect Himself

This aphorism, written by H. G. Finlayson, is quoted at the head of the Soil Association's first ever statement of standards for organic husbandry[1]. Most of the content is technical – laying out general principles for the care of soil and crops – but the quotation makes it clear that organic husbandry is regarded as more than just the adoption of special techniques. Techniques are easier to specify and legislate than changes in attitude, but most standards for organic production include an indication that the principles of organic agriculture flow out of a particular sort of relationship to the natural world and imply that this relationship is more fundamental than the practical details of the standards. For example, one of the 'principal aims' of organic agriculture according to the 1989 IFOAM standards is "to work with natural systems rather than seeking to dominate them" (1989: 4); the Hungarian Biokultura Association describes itself as "promoting a harmonious interaction between nature and human beings, with a view to maintaining health" (*Star and Furrow* 72: 19); the first principle of organic production cited by the 1992 Soil Association Standards is to "co-exist with, rather than dominate, natural systems" (1992: 3.102). Two decades ago, in *Small is Beautiful* Schumacher identified the first of three tasks of agriculture as being "to keep man in touch with living nature, of which he is and remains a highly vulnerable part" (1973: 93). Significantly, the recent EC regulation on organic production and the UKROFS Standards do not mention the relationship between humans and nature at all; both of these documents have been formulated by bureaucrats with no claim to grassroots involvement in the organic movement, and the intention has been to define the boundaries of organic production without implying ethical or indeed technical superiority over other agricultural methods.

The attitudes and value-systems of organic producers are, by and large, formed by experience and intuition rather than formal introspection and logic. They have chosen to explore alternatives to conventional agriculture at a practical level rather than develop abstract theories. Some producers explicitly adopt a particular ideology such as permaculture, anthroposophy, or Christian stewardship – all of which are discussed later in this section – while others pick and choose bits of philosophical ideas which resonate for them in the same way as they pick up a hotchpotch of agricultural tips. However, 'really organic' producers are united in thinking that there is a philosophical as well as practical problem with the way most contemporary humans relate to nature, so it is worth

[1] This early set of standards were drawn up around 1974 (although they carry no date). The text covers only two sides of paper, in contrast to the 1992 Standards which are 105 pages long and cross-referenced with the UKROFS standards and with EC regulations on both organic production and general food hygiene.

reviewing some of the philosophical ideas which feed into the organic movement – and noting at the same time that they are not always used in the fashion intended by their originators.

The rather poetical 'mission statements' quoted above from various standards all serve primarily to indicate the relevance of philosophical and moral issues – they do not attempt to prescribe a detailed doctrine. Variations on the Soil Association's phrase are in common currency among producers in this country, but when I asked interviewees what they thought "co-existing with, rather than dominating, natural systems" meant in practice, their interpretations were diverse. A few of the more pragmatically minded producers found it altogether meaningless, but this was only to be expected, and as one interviewee told me:

> *Of course, to lots of farmers it would be completely unintelligible to open your standards booklet and find a lot of stuff about ethics in there, but to the extent that they find it unintelligible they are out of touch with what organic farming is all about.*

Philosophically, producers' responses to the question of 'co-existing' can be divided according to whether or not they think of humans as separate from (the rest of) nature. Some producers talk in terms of a fundamental division – the nature/culture divide beloved of anthropologists – and portray agriculture as inevitably dominating nature. The philosophical precedent for this is the 'Great Chain of Being' in which "the place of humans was thought to be above the animals and below the angels... people could see that their privileges were limited and safeguarded by certain responsibilities" (Berry 1977: 55). On this view conventional farming is guilty of abusing our role as 'stewards' by excessively dominating and abusing the natural world[1], but it is possible to find a balance. As a survey respondent wrote, one should aim for "a custodial attitude as opposed to an exploitative one".

The second line of response is to characterise humans as indivisibly part of nature. By working organically producers can hope to find a niche within nature: in the words of another respondent, "living as part of the ecosystem" rather than attempting to control it, however benignly, as an outsider. This resonates with theories of 'deep ecology', which stress the interconnectedness and interdependence of all aspects of nature, animate and inanimate. Deep ecologists do not accord humans any special status; we are part of nature, not above or outside it and the power we currently wield as a species is seen as

[1] One modern Dictionary of Agriculture (1990) does not even have an entry under 'stewardship'.

disproportionate and morally unjustifiable (Devall and Sessions 1985: 70)[1]. Or, as an interviewee put it:

> *There is this attitude that human beings are the most important thing on this planet. We're not, and if we have this attitude we will actually destroy ourselves. We're so arrogant.*

Philosophically, these two lines of argument are distinct, but they each contain useful insights for 'really organic' producers as they both explore the human relationship to nature as a moral issue – they are making claims about how we ought to behave.

The question of the relative values of wild and cultivated land is another area of philosophical speculation. The opposing views are particularly visible in the history of the USA, where the pioneer tradition encouraged men to prove their manhood in conquering nature. From this perspective, in the view of the chief of the US Bureau of Reclamation, "wilderness, being uncontrolled, was a threat and a challenge, an insult to man's talents for environmental modification" (Nash 1967: 239). As the area of wild land in North America diminished, appreciation of it increased: Ralph Waldo Emerson, Henry David Thoreau and John Muir expounded a transcendental view of nature in which there is a correspondence between the higher realm of spiritual truth and the lower one of material objects. Rather than seeing man's role as that of wielding god-like power, they encouraged contemplation of wilderness as a route to the divine. Among other things, this view puts agriculture in opposition to nature: in the presence of wilderness we can only be voyeurs, while cultivated land is not attributed with any morally uplifting influence because it has been transformed by humans.

A similar pair of opposing values operate in contemporary Britain: we have intensive production in some areas, and wilderness, or at least nature reserves, in others. The schism exists even at a farm level: immaculately weed-free fields punctuated by specially created 'wildlife habitat'. The deal which is implicitly made is that because some land is designated as natural we are free to use the rest unrestrainedly – we may even be thought to have a duty to maintain a human imprint on it rather than allowing it to become 'derelict'. In contrast, 'really organic' producers are concerned with their relationship to the whole of nature: to the land they cultivate as much as to designated wildlife areas, and in the way they live as well as in their husbandry of land.

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[1] This has led to accusations of misanthropy, and there is a rival school of 'social ecology' which gives human needs greater priority.

In *The Unsettling of America* Wendell Berry, who is himself a farmer, blames the modern trend towards specialisation of employment for our loss of the understanding that:

> ... we and our country create one another, depend on one and another, are literally part of one another; that our land passes in and out of our bodies just as our bodies pass in and out of our land; that as we and our land are part of one another, so all who are living as neighbours here, human and plant and animal, are part of one another, and so cannot possibly flourish alone... (Berry 1977: 22)

'Really organic' producers in this country are thinking, and trying to act, in similarly holistic ways, and the condensed precepts in the various organic standards about co-existing or maintaining a harmonious relationship with nature do reflect the experience of some of the people working on the ground.

In the agricultural realm it is human – although pre-eminently male – domination of the natural world which is seen as problematic. The feminist movement, in focussing on the parallel issue of men's domination of women, has come to similar conclusions about the need for an integrated, holistic worldview and new paradigms for the use of power:

> We are now in a time of changing consciousness. The feminine principle has begun to express itself with the strength of conscious awareness; to balance the masculine urge to separate, discriminate and control, with the feminine impulse towards belonging, relationship and letting be. It is the strength of the feminine which can guide us towards a consciousness which, though aware of polarities, is concerned with their interplay and connectedness rather than their conflict and separation. (Leland 1983: 71)

There is evidently a theoretical convergence between feminist and ecological thought and, as said in the introduction to the article from which the above quote is taken, this gives potential for 'cross-fertilization'. Books such as Andrée Collard's *Rape of the Wild* (1988) and Susan Griffin's *Woman and Nature* (1978) make the connection, but it was remarkable in the course of this study to notice how infrequently organic producers mentioned parallels between the exploitation of nature and of women. At a practical level some organic households, particularly those with urban backgrounds, attempt to share equally the work usually prescribed by gender. However, there is also a contrary tendency within the organic movement to increase the value placed on the traditionally nurturing and home-based work of women – which can lead to them wanting to retain this role rather than be 'liberated' from it. The self-sufficiency movement contributed to the latter tendency: it is characteristic of John Seymour's *Complete Book of Self-Sufficiency*, that although it shows men and women working alongside each other when gardening, it has a cover picture

of a modern 'earth-mother' serving bread to her children from a table laden with home produce – while the man behind her quaffs a beer.

Those organic producers who are not 'converted' in their way of life are perhaps unlikely to make connections between methods of agricultural production and feminism, but it is noteworthy that even 'really organic' producers tend to object to aspects of modern society such as trans-national social injustice, militarism and consumerism more than to patriarchy[1]. However, they do commonly invoke 'female' characteristics such as intuition and integration in support of an organic worldview – in the same way as they adopt individual concepts from environmental philosophy. Moreover, the concern to develop a relationship with nature is felt by many, both men and women, to be developing the female aspects within themselves; far from being irrelevant, on a personal level this is so closely identified with being organic that it is not treated separately.

There is another cluster of ideas which are contributing to changes in opinion about agriculture; as C. P. Veerman said recently, at the prestigious (conventional) conference held in Oxford by the Home Grown Cereals Authority:

> A new philosophical vision as to man's position in nature is currently arising. This wave of 'green philosophy', also called the New Age movement, emerged from modern physics, biology, and, at first glance, most remarkably, from mathematics. These new philosophies are based on the ancient visions of, above all, the Eastern philosophers and mystics. In Anglo-Saxon literature the books of Capra have played an important role. Simply, and in concrete terms, this 'new thinking' leads to a global image, in which man is no longer viewed as the ultimate element of creation, or, if you prefer it put differently, the final stage of biological evolution, gifted with the power of understanding. (Veerman 1993: 2)

There are problems with the label 'New Age', which is sometimes associated with fey self-indulgence, but the ideas mentioned by Veerman have nevertheless been influential for some organic producers. This is partly because of the positive content of the various theories, in particular the stress on interconnectedness, but also because they undermine the scientific orthodoxy that people have grown up with and can thus give them the courage to develop their own ideas.

So far I have considered mainly the philosophical theories which touch on human relationship to nature. In reality, people's ideas are not always organised like this, as

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[1] This was apparent in interviews, but even more so in responses to the open-ended survey question, as no-one made reference to issues of gender or male domination, yet many were explicit about the exploitation of developing countries or their dislike of the materialistic, consumerist ethos.

the discussion about domination of the female principle illustrates. The common thread in all my interviews with 'really organic' people is that they identify a problem, ethical as well as practical, in the way we relate to nature – as individuals and as a species. Their response is to integrate things, to make connections, to look at the context rather than just discrete issues – although producers are not united in their particular beliefs, or indeed in their ways of expressing them. I shall now consider this cluster of issues as they are discussed by organic producers.

Although I have defined 'really organic' producers as those who think there is an ethical content to what they are doing in their agriculture, some nevertheless try to avoid mentioning this. One grower protested vehemently that his choice was not ideological (I had not suggested that it was, but he was used to having to defend this position). He claimed that "global circumstances dictate the way we live" and that he simply didn't want to "destroy our own life-support system" (i.e. the planet), although he was of course aware that many people perceive such problems and yet continue to be guided by short-term self-interest. It was evident that he did think that there were rights and wrongs in how people chose to live, even though he hesitated to label them 'ethical'. When he later said "we used to live a lot better once, used to be really hard-line, didn't consume hardly anything" it was clear that he meant 'better' in an ethical sense, and that for him this implied among other things, deliberately adopting what would conventionally be regarded as a low standard of living.

There are also other producers who want to justify themselves in rational and pragmatic terms – even although they are also motivated by feeling that they are doing what is 'right' – because playing down the ethical content makes organic agriculture and ways of life appear less threatening. This can be useful either to get conventional farmers interested by implying that conventional methods are outdated rather than wrong, or simply to be able to lead a quiet life: it offers a way of avoiding being pushed into an evangelical role by people who want an argument.

On the other hand, many 'really organic' people are entirely up-front about not liking capitalism, industrialism, consumerism and the concept of economic efficiency[1]. In the survey returns typical comments on these themes were "I have a great loathing for

[1] This has also been noted in Fischer's study of German-Swiss organic producers (1982: 242). Cornford, in his introduction to the anthology *The Organic Tradition*, attributes the anti-capitalist strain of thinking within the organic movement to "a certain nostalgia for mediaevalism (sic) rather than an adoption of socialism" (1988: 7).

conventional capitalism" and "the planet is being destroyed by our ignorance and consumer-led decadence". Deciding to work on the land, or converting from conventional to organic farming, can be seen as 'opting out of the system' and, despite some organic producers trying to minimize the challenge represented by this, others are happy to embrace it: they feel that they have identified certain wrongs in contemporary society, often at a structural level rather than just personally, and have had the courage to strike out and explore alternatives. 'Really organic' producers typically think that there is something wrong with the way that our society interacts with the natural world, and that this problem underlies many of the others. Developing a 'relationship' with nature, therefore, can be more than merely a personal goal; it is also setting an example to others.

The desire for a 'relationship' with the land or with nature is expressed in phrases such as "being in tune with the earth" and even "working in love and harmony with mother earth". The words 'husbandry' and 'nurturing' are also used to give the sense of a relationship, as between husband and wife or parent and child. In contrast, someone who says that they are 'caring' for the land may merely be doing so in the same way as they look after, or care for, their possessions. In reacting to conventional agriculture and much of contemporary society – which they characterise as aiming to gain control over nature – organic producers stress the need to be in touch with nature. This is valued on a personal level: by seeing themselves as in a relationship with the land, or with nature, producers give themselves a context in which to learn and develop as people, rather than just being concerned with producing crops. It is also seen as a route towards learning how to use responsibly the power over nature that they unavoidably exert. As one farmer said about the tag 'co-existing with, rather than dominating, natural systems':

> *It was a meaningless phrase to me and has only become more meaningful as I've gone into this [organic farming]... Co-existence is about tolerating pests to a degree; it's a matter of keeping things under control rather than eliminating them.*

As hinted in this quote, producers often feel that they are *discovering* what is right through working with the land, rather than just choosing (or being told to choose) certain moral principles. Unsurprisingly, the principles revealed through working with the land tend not to be as anthropocentric as many we are used to in religion or secular society. Learning morality from nature is not a novel concept although, being experiential, the process is unique for each individual. As long ago as 1952 Edward Hyams, in *Soil and Civilisation,* described it thus:

> The farmer who works land similarly worked by his spiritual, if not physical, ancestors during a score of generations, need not be stupidly

> conservative: he may employ new methods, grow new crops, and use new tools. But he will, by a sort of intuition which rises out of his organic relationship with his land, test each novelty before he adopts it, by reference to a code of morality in his relations with soil, a code which he has inherited. He will respect the land as a life, never exploit it as a mineral. (Hyams 1952: 82-3)

There is a philosophical conundrum about whether it is possible to derive ethical or moral principles from objective 'facts'. Western moral theories generally rely either on hypothetical social agreements, in which people agree to abide by certain rules, or else on divine authority. In either case the morality or otherwise of behaviour to non-humans is determined by an extension of the human moral system. Organic producers are following the same route by personifying nature – in phrases such as 'mother earth' and in the more widespread tendency to characterise a *relationship* with nature as personal, without being committal about the specific identity of the latter. Both these moves result in a sort of animism, which makes it easier to ascribe moral content to the actions of humans on nature. They can be a way of rationalizing, philosophically and psychologically, a pre-existing conviction that morality is relevant, but some producers seem genuinely to have come to adopt a moral stance as a result of experiencing their relationship with nature in a personal way.

Much environmentalism is concerned with how the human species should act for the sake of its long-term survival. The practical recommendations may be similar to those put forward by people who think that there is moral content to our relationship with the natural world, but there is an important underlying difference which is paralleled in the distinction I have drawn between people who merely use organic techniques and those who try to be really organic. The latter have come to espouse the moral view partly through experience. One outcome of this is that to some extent the relationship with nature is thought of as symmetrical: it is not just that we should act morally towards nature; she/it can also be expected do so towards us. Crops grown on organic land are often thought to be healthier than chemically grown ones both in the sense of being resistant to pests and disease, and in being 'vital' and more health-giving rather than just chemical-free. This can be explained to the satisfaction of many organic producers in scientific terms – differences in mineral content for instance – but for others this is not a complete answer and the phenomenon is more illuminatingly seen as nature's response to human love and care. Fischer found that:

> Again and again organic farmers display an extraordinary trust in nature. If one just allows nature to get on with it, and treats her appropriately, health and crops will result. (1982: 232[1])

Reciprocal morality between humans and nature is obviously a problematic idea philosophically and, moreover, does not sit very easily with the widespread notion of nature as 'red in tooth and claw'. However, our images of nature are themselves cultural products, and other societies and other ages have been known to generate much less violent ones. Only in one interview was it clear that the idea of reciprocal morality formed the basis of a producer's worldview, but it emerged in others as part of the picking and choosing of ideas which were useful in certain situations although not taken as guiding principles. It was particularly evident in the attitude of a few people who had talked to pests such as rooks, mice or rabbits, in an attempt to persuade them not to destroy crops. One farmer had tried to explain to the rabbits that he didn't mind if they nibbled at the winter wheat, but please would they do it right across the field, rather than all in one patch. It was to no avail, but he explained – and he was only half joking – that he thought it was understandable that they had not heeded him as he still farmed part of his land conventionally and therefore hadn't got a leg to stand on; if he was doing things in a way that was really in harmony with nature maybe the rabbits would listen!

The interviewee who took reciprocal morality most seriously claimed success with psychically sending pests away. After nearly twenty years of farming organically, he felt that he had only recently begun to understand what co-existing with nature really meant, and this was why nature was now responding to him. He found it difficult to put this into words, and in the interview I felt I was touching on something which was, in a strict sense, sacred; even my professional curiosity was not enough to make me want to intrude. This farmer also asked forgiveness of the worms when he went ploughing – and he is not the only one to do so. The key to understanding co-existence with nature in this deep sense is that, for some people, such a gesture can be utterly appropriate and meaningful rather than making them feel self-conscious and silly. Links are also made with contemporary peasant farmers of different cultures, and with the farmers of previous centuries for whom, according to Hyams:

> ... every plant and animal and stone and the very Earth herself were alive and animated by spirit. And since, from self-knowledge, man knew that mind and matter, soul and body must be in harmony, in order that the whole

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1 "Immer wieder stösst man bei Bio-Bauern auf ein ausserordentliches Vertrauen in die Natur. Wenn man sie nur machen lasse und ihr gemäss handle, werde sich Gesundheit und Ertrag einstellen."

> should function, he also knew that in manipulating the body of the living world, he must be at one with the spirit animating it. (Hyams 1952: 285)

Talking to rabbits may seem an extreme example of trying to 'co-exist' with nature – trying to produce crops without being manipulative – but similar ideas are put forward by 'really organic' producers at different levels and in different contexts. For example, a grower was concerned about the use of biological controls, such as the introduction of predatory insects to control aphids or whitefly:

> *One guy said to me "have I got my biological controls sorted out?" and I thought to myself, no, I haven't got my biological controls sorted out. Why haven't I got them sorted out? Am I missing something? Am I doing something wrong? And I thought about it for a while and I realised that in fact it's got the same attitude behind it again... what you're doing, in my opinion, you're perpetuating the symptom which you should actually be looking at as a symptom of something wrong in the basic set-up.*

The worry here is not about accidental releases or unforeseen side-effects, but that biological controls are a 'quick-fix' answer, a biological rather than a chemical panacea which can distract attention from the root cause of problems. Farming with chemicals, and indeed biological controls, assumes that problems are inevitable, but this grower is working on the opposite assumption that it is an aberration if pests and diseases damage crops – although they will usually be present to some extent. On this view, if problems are 'controlled' directly, either chemically or biologically, it will tend to do more harm than good by upsetting the overall balance even further. It is an image almost like the garden of Eden; growing crops is not an imposition on non-human nature but part of the intended order of things. Like wild 'climax vegetation', a garden, or a farm, has a natural stability or resilience as long as humans are content not to overstep their proper role.

Even organic producers with a less mystical approach are chary of dominating nature: one farmer said specifically that he didn't want a perfect-looking farm, but a mixture of wild and cultivated because he didn't want to "bend it to his will". A grower also told me that although she used heat in one greenhouse for germinating plants she felt that it was forcing things a bit: "we shouldn't really be growing it in this area if it needs so much heat". Like many others, she had compromised her principles to the more immediate concerns of providing customers with a choice of produce and generating sufficient income, but what is interesting is that it was not the expense or efficacy of heating a greenhouse which worried her, but the idea that it was ecologically inappropriate.

Integrated Value-Systems

Spiritual awareness

Many 'really organic' producers are happy to work out their ideas about ethics and human relationship to nature in an individualistic way, without identifying with others in a common cause or looking for a source of authority. In the words of one farmer "the values I have are ones that I've concocted myself rather than borrowed from a set orthodoxy". As discussed earlier, the organic movement does not do more than indicate the importance of these issues; there is no dogma, and no real attempt to gain consensus. Despite the use of the concept of conversion, not all 'really organic' people respond spiritually in addition to recognising ethical imperatives although, as one commentator notes:

> ... it could be argued that the organic movement is inherently religious in a general sense, since it is based on reverence for the laws of nature – literally, on humility – rather than on the arrogant assumption that the earth can be indefinitely persuaded or forced to do Man's will." (Cornford 1988: 12).

Some producers are Christian, a few adhere to other mainstream faiths, some have a spiritual awareness that does not fit any religious category, while some are involved in anthroposophy or are part of the permaculture network – both of which overlap with organic ideas and practice and often inspire a stronger sense of allegiance.

Fischer found in Switzerland that alternative agricultural methods were not just adopted for practical agricultural reasons, but "are just as much an expression of a particular way of life and generally go back to one's world view: spiritual-religious, ethical, intuitive and non-rational feelings and impressions" (1982: 230[1]) and the relevance of at least an unspecific spiritual awareness was indicated early in the development of the movement by Lady Eve Balfour in *The Living Soil:*

> 'Man cannot live by bread alone', but neither can he survive in his present form without it. The symptoms of spiritual revival in our age are among the most hopeful signs for the future, but the earthly habitat of man's spirit is in his body, and the roots of his physical and mental well-being spring from the soil itself, whether the individual be town or country dweller. (Balfour 1943: 13)

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1 "sind ebensosehr Ausdruck einer bestimmten Lebenshaltung und gehen in weitem Masse auf weltanschauliche, geistig-religiöse, ethische, intuitive und nichtrationale Ueberlegungen und Empfindungen zurück."

Organic production is still seen by some as a locus for such a revival, as witnessed by the survey respondent whose reason for being organic was "to explore the spiritual and social impulses being expressed in the organic movement"[1]. Such impulses are often not orthodox, partly because the experience of working with nature is unique for each individual:

> *I never go to church because I don't particularly want to worship my God with other people. I suppose my farm is my temple. I believe very strongly in a supreme being, probably not in the way that a lot of other people believe in him, but he's there – or it's there. And I'm very close to it. It is perhaps not a comfort to me, but it's stabilising. Sometimes in periods of drought like we've had the last few years I begin to wonder; but then you get a new-born lamb that's up and suckled in ten minutes. Oh there's something there, I'm convinced. But I've no desire to go to church and worship with other people at all. I say my little prayers or my little thoughts on my farm.*

Several of the people I interviewed felt that their lives were lacking because they were not sufficiently spiritually awakened. One man put this down to his upbringing: "it's probably just sheer prejudice from my scientific education, I find it very difficult to get over; I'm probably missing out, because there's a whole spiritual side to life that I haven't tapped into yet". Another blamed contemporary social structures:

> *I regret the lack of a focus that a strong religious faith can give you. There is little chance of celebration or group activity in the scattering and divisiveness of modern community nowadays. I wish I was more religious and belonged to a group – the nearest I get to a spiritual gathering is the bridge! It's the final vestige of men's clubs, we talk philosophy.*

Some people, particularly incomers to agriculture, respond to this lack by taking up meditation, or attending quasi-spiritual gatherings such as circle dance groups, and a few of my interviewees had a passing interest in Buddhism. However, Christianity of one sort or another is by far the most common form of organised religion among organic producers.

Although it was outwith the scope of this study, it would be instructive to approach the connection between religious faith and agricultural methods from another angle – by finding out how many of the religious communities in Britain practice organic gardening for their own use. Certainly the Christian community on Iona does so, and the Buddhists at Samyé Ling in Dumfriesshire; while the 'new age' community Findhorn first achieved

[1] However it is worth noting that one family, who were still trying to live organically, had given up growing because the relentlessness of the work had sapped them – especially spiritually.

fame by producing enormous cabbages on sandy soil in Grampian by using organic methods – and by conversing with the 'devas', or spirits, of the plants[1].

Christianity

Some Christian organic producers, particularly those who are not converted to being 'really organic', practice their faith without making more than superficial connections between religious doctrine and the way they farm. Few are aware of the strain of thought which holds the Christian Church culpable for the exploitative attitude to nature which prevails in the West and has been exported across the globe. In his seminal 1967 article, *The Historical Roots of Our Ecological Crisis*, Lynn White Jr. argued that this attitude was the tragic result of Christianity's dualist view of man and nature forming the intellectual background for the sudden fusion of Western science and technology in the nineteenth century. He concluded by proposing St Francis as the patron saint of ecology on the grounds that he had rebelled against the "Christian axiom that nature has no reason for existence save to serve man" (White 1967: 1207).

On the other hand, the Christian doctrine of stewardship, that "the land is a sacred trust, given by God to our care" (Hart 1984: 4), counteracts this negative view of Christianity. Stewardship is a restraining principle, limiting the legitimate use of nature and putting humans in a position of responsibility. However, the effectiveness of this depends on a religious context. Once stewardship is used as a secular principle – which it frequently is – humans usurp the position of God at the head of the 'Chain of Being' and this effectively sanctions the unrestrained use of power (Berry 1977: 55). Even if we are thought to have obligations to future generations, a secular version of stewardship puts us in the position of being simultaneously judge and judged.

Christianity's rather mixed environmental credentials help to explain why, although many organic producers are Christian, and being 'really organic' is commonly connected with increased spiritual awareness, none of my interviewees indicated that they had adopted Christianity as a result of organic involvement. The people for whom this faith was important seemed to be Christians first and 'organic' second – chronologically, and in

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[1] My research techniques would not have been entirely appropriate for use in communities where decisions were made jointly. Some of my interviewees were involved in group decision-making, because they worked as a family or were part of a co-op. These people found themselves in the predicament of answering questions from their own point of view, simultaneously trying to remember and interpret the views of others, and also explaining how responsibilities were divided and how they organised themselves. Participant observation was, in my experience, the most successful approach to this situation.

terms of their priorities. Indeed, one grower went out of his way to tell me that he would far rather convert someone to the Christian faith than persuade them to grow organic vegetables. And another interviewee recounted that his interest in organic agriculture stemmed from being a Methodist lay preacher:

> *My first questioning of conventional agriculture was when I was taking a harvest festival service. I remember describing to the congregation how I discovered that some farmers were putting nitrogen on to make the corn grow and then putting a growth regulator on to stop it growing too big; and I just thought 'that's hideous'. It made very good economic sense at the time but that seemed to be symptomatic of the way farming was going. It seemed to me that if you put less nitrogen on in the first place you wouldn't need the growth regulator.*

This farmer often found himself in the dilemma of whether to adhere to received doctrines or to interpret the Bible in ways which he felt were more relevant to the spirit of the times. Somewhat to the consternation of his congregation, he tended to choose the latter course.

Environmentally concerned theologians are engaged on a similar task in books such as the dogmatically titled *God is Green*[1] which suggests that what we need is not:

> ... a new theology of nature but rather a return to the original message contained in the Bible and preached and practised in the early Church... greening Christianity does not involve grafting on to it some alien philosophy but simply restoring its original character. Indeed, it means stripping off a whole series of alien layers that have accumulated to reveal the original greenness of the Garden of Eden and the cross on Calvary. (Bradley 1990: 7)

One particularly controversial enterprise in this area is the work of the former Dominican priest Matthew Fox[2], who draws together the threads of 'creation-centred spirituality', which rejects the fall/redemption paradigm in favour of 'original blessing'. He interprets Christian ideas in ways which – among other things – celebrate the whole of nature rather than focussing on human salvation. This resonates with some of the spiritual experiences recounted by 'really organic' producers – indeed, his books are known to a few of them. However, it is significant that his ideas are considered heretical and led the Pope, in 1993, to expel him from the Dominican order.

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1 See also Hart 1984.

2 See specifically *Original Blessing* (1983).

Some Christian farmers feel that by using organic methods rather than conventional ones they are better able to fulfil their role as stewards of the earth. There is also concern from within the faith to explore teachings which are appropriate to an age faced with ecological crisis but, as yet, Christianity does not seem to make converts among organic producers as a result of its environmental vision.

Bio-dynamics

Bio-dynamic agriculture is based on a series of lectures about agriculture which Rudolf Steiner gave in 1924[1]. The *British Bio-dynamic Agriculture Association* now operates a symbol scheme, registered with UKROFS, which licenses producers under the symbol 'Demeter'[2].

The anthroposophical movement which Steiner inspired has a distinctive perspective on all aspects of human life and spirit, but it is best known in the realms of education, homoeopathic medicine, architecture, visual art, eurhythmy, and of course agriculture. The spiritual foundation is Christian, and the works of Goethe are taken as authoritative in scientific realms. Anthroposophy, as its name suggests, is profoundly anthropocentric: humans are explicitly considered to be the pinnacle of creation. It is an "occult system claiming that the key to wisdom and to an understanding of the Universe lies in man himself"(Dictionary of Philosophy 1979).

Bio-dynamic farmers and growers consider that they have a responsibility to create and uphold balanced relationships within nature (Groh & McFadden 1990: 13). Although this may sound similar to organic principles such as "co-existing rather than dominating natural systems", it is actually legitimizing human intervention as a positive force rather than just putting limits on our more destructive activities. The anthroposophical view can be illustrated in the context of trees by a quote from an anthroposophical book of text and paintings entitled *Dying Forests – A Crisis in Consciousness:*

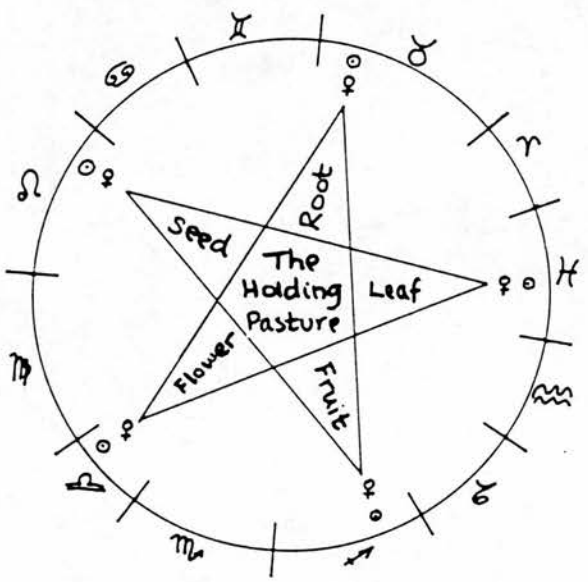
> Each little group of trees or plants, left to itself, strives out of its own inherent forces to assume a rounded, but rhythmical form, and so to blend harmoniously into a larger life-context. In untouched nature this can lead to a certain monotony. By consciously directing certain themes or motives from nature, man can raise nature to a higher level. In a forest, for instance, the Oak can only develop its characteristic form to a limited degree. The

1 Published as *The Agriculture Course*, Steiner (1924).

2 Significantly, the name of a Greek Goddess associated with the products of the fields.

> typical oak comes to be when man restricts the vegetation around it. (Bockemühl 1986: 30)

Working backwards, the shape of an oak, to continue this example, can also be used to interpret features about the environment in which it has grown. If, as a sapling, it was surrounded by taller trees it will never have the low, spreading branches of parkland oaks; in its leaves can be read the history of the year's weather; its growth form may also reflect the composition of the soil. In such ways, every plant is a microcosm of the forces which produced it – Bockemühl gives an analogy of a dewdrop which mirrors the surrounding world (1986: 64). To a certain extent these ideas are familiar to people who are not anthroposophists – we all know that a tree's age can be counted in the rings of its stump and that thin rings indicate lean years – but Steiner's philosophy embraces much wider correspondences. The influence of the moon and planets on plants is considered particularly important – hence the bio-dynamic planting calendar which gives the appropriate days for sowing and harvesting crops according to whether their edible part is root, flower, leaf, seed or fruit[1].



Fivefold bio-dynamic rotation in the context of the conjunctions of Venus and the Sun: part of the background to the planting calendar. (Thun 1990: 33)

A bio-dynamic farm is regarded as a largely self-contained and integral whole (Sattler & Wistinghausen 1992: 11-3); this idea is also current in the wider organic movement, but the

[1] The classification of plants according to their human use rather than conventional botanical distinctions is also typical of anthroposophy.

bio-dynamic view is more nearly literal and is taken as having greater practical implications. Groh & McFadden attribute the concept of farm as organism directly to Steiner and describe it in the following terms:

> In the biodynamic approach, the farm is seen as an organism, and that underlying concept is part of all considerations and actions. By definition, an organism is a living entity consisting of parts, or organs. The function of each part is essential to the existence of the whole, and also to each of the parts. An organism has its own inner life and circulation that is different from its surroundings... Ideally [domestic animals] feed from the vegetation inside the farm, summer and winter, without anything brought in from other farms. The animals respond with a manure that is formed exclusively by the flora of the farm organism. This manure is collected, and when properly treated comes back to the plants of this place, stimulating them. In this process of correspondence between the farm animal and farm vegetation, the farm develops and becomes more and more individualized. (Groh & McFadden 1990: 20-1)

'The preparations', as they are somewhat mysteriously known, are also central to bio-dynamic agriculture. There are six preparations used in making compost, and three additional ones: 500 which is chiefly sprayed onto soil when planting; 501 which is used on growing crops; and 508, which is mainly used against fungus (Sattler & Wistinghausen 1992: 83-90). The liquid preparations are made, like homoeopathic medicines, by diluting a small quantity of the 'active ingredient' with a large volume of water and potentising the mixture by special stirring techniques. 500 is made from specially prepared cow manure and "provides an immensely concentrated fertilizing power for the soil... root growth and primary shoot development are specifically enhanced" (1992: 93). 501 is based on powdered silica rock crystals and "enhances the plant's ability to make effective use of the dynamics of light (1992: 94). Examples of associations made with these two substances will serve to demonstrate both why anthroposophy can seem impenetrable to outsiders and conversely why the bio-dynamic movement is so cohesive – adhering to the philosophy is an all or nothing affair because it cuts across conventional scientific paradigms. A bio-dynamic grower explained that while 500 would produce a heavy soil effect, 501 promotes a light quality. Silica is a major component of sand and:

> *... after all, sand is what glass is made of. There is an association with this quality of light, perhaps it takes a little following but you can see it in the use of silica sand which is used for making binoculars – all the best quality glass – and glass has this element of light. That's what we would feel, balancing the light with the darkness of the earth in these two preparations.*

It is significant that this grower said "that's what *we* would feel"; the organic producers I interviewed all spoke for themselves, and were sometimes uncomfortable when I asked

them to speculate about the motivations of others in the movement[1], whereas bio-dynamic people slipped easily into explicating the anthroposophical line.

Returning to the preparations, a typically anthroposophical web of connections can be traced. Cows are idealised as the supreme expression of a domesticated animal, and hence it is cow manure rather than any other sort which is the basis of preparation 500 and the horns, skulls and intestines of dairy cattle which are used in the process of making the preparations. Cow's milk is correspondingly exalted – as shown by this extract from the British bio-dynamic journal *Star and Furrow*:

> If we are all sufficiently aware and active, we can overcome this attempt to outlaw the sales of raw milk. Milk gives us a feeling of being a member of the human race, each with our own particular tasks. It enables us to be a citizen of the earth, while still feeling united to the whole solar system. When we call to mind the statement by Rudolf Steiner that milk is "crystalised love", then we can remind ourselves what an important substance this is for our children and ourselves. (*Star and Furrow* 72: 12)

Although there are only about fifty registered bio-dynamic producers in Britain, their influence is important. Some organic producers find the theory offputtingly esoteric (as one said: "I find the philosophy behind it incomprehensible... I'm not cut out to be a sort of alchemist or a magician") bio-dynamic people are nevertheless generally respected for their sincerity and on account of the results they achieve. In the words of another farmer:

> *When I originally started thinking about organic things, bio-dynamics seemed sort of totally potty. But as I became more organically-minded myself, I began to regard bio-dynamics as a very considerably more advanced, total philosophy and growing system – compared with straightforward organics. So I have a lot of respect for it, considerable failing to understand it, and no immediate intention of trying to practice it. But I certainly regard it as less the far reaches of insanity than I did when I first met it.*

Bio-dynamic livestock farmers certainly led the way in using homoeopathic veterinary treatments, which is now an established option for organic farmers although not quite universal. Currently, some organic producers use the planting calendar or experiment with the preparations while remaining perplexed by the overall philosophy. Anthroposophical 'Camphill' communities such as Botton Village, which is home to both mentally handicapped 'trainees' and volunteer 'co-workers', have a strong influence on

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[1] In one of my questions I asked "What do you think are the most common reasons for people to start farming (or gardening) organically?", with the intention of finding out what interviewees' own assumptions were. Several interviewees explicitly objected to being cast, as they saw it, in the role of spokesperson for the movement.

local organic producers by providing an example of what can be achieved on farms which have opted out of mainstream social, economic and agricultural systems. The anthroposophical movement has also spawned several of the few working examples in this country of Community Supported Agriculture – a concept which has been heralded by the Bristol organisations as an alternative for people who find that "involvement with the supermarkets does not rest easily with their belief in the fundamental tenets of sustainable food production" (*New Farmer & Grower* 35: 20)[1]. The influence of bio-dynamic agriculture is international: Emerson college, in Sussex, has been running training courses since 1970 which have drawn students from all over the world, and bio-dynamic agriculture has gained a particularly strong foothold in Eastern Europe[2]. This latter is only partly because bio-dynamic agriculture was widespread in West Germany and thus influenced the East after unification (*New Farmer & Grower* 31: 14); it is also due to the intentional 'outreach' of the bio-dynamic movement[3].

Logo of Emerson College's 1993 workshop (Emerson 1993: 1).

1 See the section on marketing at the end of this chapter for further discussion.

2 There are now over 137,000 acres under bio-dynamic cultivation in Eastern Europe (personal communication from Demeter Fieldsman 24/9/93).

3 This contrasts with the relative insularity of at least the British organic movement, for which the main international preoccupation of recent years has been the development of the EC regulation on organic production.

Emerson College is also pioneering in its attempts to draw on indigenous and peasant knowledge systems to stimulate "the reformulation of development policy and of our own ethics and values, to reach new forms of alliances and inter-cultural solidarity to oppose the overwhelming global problems" (Emerson College 1993: 2). Their 1993 international workshop, *Beyond Farmers First: Witch's First?!*, encouraged participation from: "Female and male 'scientists', ethnobiologists, shamans, agronomists, pastoralists, ecologists, anthropologists, expert peasant farmers, biologists, development workers, policy makers..." (1993: 3).

Permaculture

The concept of permaculture is notoriously difficult to pin down, but Bill Mollison, who coined the word and initiated the movement, defines it in the following terms:

> Permaculture (**perma**nent agri**culture**) is the conscious design and maintenance of agriculturally productive ecosystems which have the diversity, stability, and resilience of natural ecosystems. It is the harmonious integration of landscape and people providing their food, energy, shelter, and other material and non-material needs in a sustainable way... The philosophy behind permaculture is one of working with, rather than against nature; of protracted and thoughtful observation rather than protracted and thoughtless action; of looking at systems in all their functions, rather than asking only one yield of them; and of allowing systems to demonstrate their own evolutions. (Mollison 1990: ix)

Permacultural systems are 'organic' in so far as they do not generally use synthetic agrochemicals. However, from a permaculture perspective, organic production is no more than "conventional agriculture without the chemicals" as I was told by a grower who had recently discovered permaculture. Permaculture, he later said "teaches you to think in an utterly different way – you look at the connections between things". The key is to respond to each particular situation appropriately; for instance, weedkiller might sometimes be considered acceptable as part of initial land reclamation – in order to kill perennial weeds which might otherwise be a persistent problem. Forest is the natural climax vegetation in Tasmania where Mollison developed his ideas and, consequently, multiple-use trees feature particularly strongly in the literature. Permaculture differs from organic agriculture in favouring perennial crops over rotational systems: rather than achieving diversity over time by means of rotations, permaculture imitates nature by mixing plant species spatially. Perennials also have the advantages that they generally require less disturbance of the soil and a lower input of labour.

Permaculture is rightly referred to as a design system; it is concerned with spreading theoretical principles and ingenious ideas which can enable people to work out the best way of providing for themselves and caring for any land they use. It embraces alternative technology as well as agriculture; indeed, it acts as a sort of global ideas interchange; it both picks up tips from traditional societies and retrospectively designates individuals' experiments as permacultural[1]. It similarly adopts and integrates novel scientific ideas such as chaos theory and Lovelock's Gaia principle (Lovelock 1979).

Permaculture is much more orientated to self provisioning than growing for a market so there are no sets of standards for permaculture or certification systems for the produce. Teaching permaculture is, however, strictly controlled, as is the registration of accredited 'permaculture designers' – who aspire to a status comparable to that of architects, and design systems in collaboration with the occupant/builder.

In contrast to the anthroposophical idea that human activity is necessary to elevate nature, the assumption with permaculture is that nature does best when left alone. Permaculture designers designate up to six zones, the innermost of which is the house itself. The most distant zone is "natural, un-managed environment used for occasional foraging, recreation or just let be. This is where we learn the rules that we try to apply elsewhere" (Mollison 1990: 50). As this quote reveals, the theory of permaculture says both that some land should be left wild and that agriculture should emulate natural systems – although more for the pragmatic reason that it is considered an effective way of developing sustainable techniques than because of any idea of what is spiritually appropriate. The approach of permaculture is secular and scientific – or quasi-scientific, depending on your point of view, as the authority implied by the multiplicity of diagrams can be seen as spurious. In common with bio-dynamics, however, permaculture makes social aspects of human life an integral part of the philosophy – although even they are made the subject of diagrams, with headings such as "An ideal demographic profile for a steady-state nation (Schematic only)". and "Schematic for an individual's probable relationships in space" (Mollison 1990: 516).

[1] The Permaculture Plot, a guide to British sites and projects, lists many which were established independently or prior to the introduction of permaculture to Britain. It is explained that the people running these are regarded as 'allies' even if they don't claim to be doing permaculture (Pratt 1991: 2).

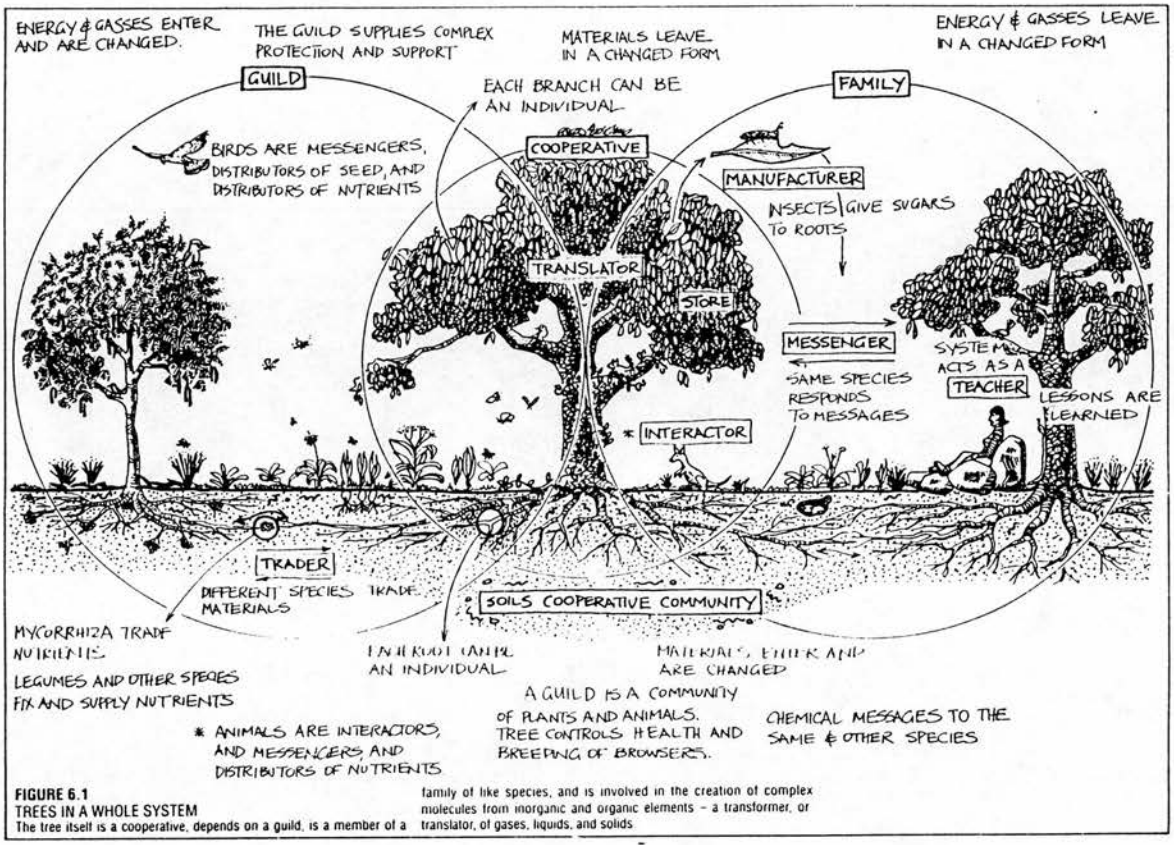

FIGURE 6.1
TREES IN A WHOLE SYSTEM
The tree itself is a cooperative, depends on a guild, is a member of a family of like species, and is involved in the creation of complex molecules from inorganic and organic elements – a transformer, or translator, of gases, liquids, and solids

Illustration from Mollison's *Permaculture* (1990: 140).

Permaculture warrants notice in the context of a study of organic producers not because of its current influence – many of my interviewees did not even recognise the term – but because it addresses all of the 'concern-issues' described in chapter 5 and is thus of potential interest to people who are motivated by them. So far, most of the enthusiasm for permaculture in Britain has come from people who were not previously involved in commercial organic production. Permaculture is much younger than either organic agriculture or bio-dynamics; Mollison claims to have begun developing it in the period 1972-74; a decade later there was an international conference and it is only since then that there has been any permacultural activity in this country. As yet there seems to be a disproportionate number of permaculture courses and publications in comparison with the number of working permaculture sites[1], and there is an acknowledged problem with adapting some of the techniques to temperate rather than semi-tropical climates. However, permaculture has the potential to capture the interest of anyone who sympathises with the aims of organic producers.

[1] The Permaculture Plot lists 34, but as previously mentioned, many of these are 'allies' rather than conscious exponents of permaculture.

Permaculture can come as a revelation to people who have been groping towards similar ideas on their own: an interviewee recounted how a friend had telephoned them to tell them to tune into a television program entitled *In Danger of Falling Food*. They found themselves watching Bill Mollison charting the permacultural path from a world where aid agencies arrange for parcels of food to be dropped from airplanes in areas of mass starvation to a vision of the future where the only falling food comes from the branches of trees. Since that day this family have been full-time advocates of permaculture: the garden has been re-planned on permacultural principles, they have had a constant stream of interested visitors, and have disseminated countless audio copies of the TV programme[1]. Another producer who responded to the survey gave their aims as being "environmental responsibility, public education towards environmental responsibility, and to encourage permaculture, the answer to all our problems!".

'Living Well'

Live more simply that others may simply live

> *We have such confused criteria for success; success is perceived as having a bigger and newer car or a newer tennis court or whatever. I think we ought to think quite carefully about defining success if it is something we wish to achieve. Being successful you could say is being content with what you've got and the less you've got the better, but that isn't how our modern economy and society and set of competitive ethics works at all.*

These sentiments are characteristic of 'really organic' people and, as previously discussed, it was striking how many people spontaneously mentioned a dislike of consumerist and materialist values when responding to the survey.

Several of my interviewees quoted the maxim "live more simply that others may simply live", which derives from a book called *Life Style*, by A. H. Dammers (1982). He argues that living simply is the only appropriate response to the global situation, even if it feels as if one's individual actions are insignificant, and even if one despairs of influencing others. A couple of people explained more specifically that they thought living simply was appropriate because "the soil needed to support one Swiss will support forty Somalis": instead of worrying about over-population in less developed countries we should look at

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1 They did not have a video recorder, and so could only tape-record the soundtrack.

the consumption and waste in our own. An alternative way of formulating this was to aim to live in a way which would be sustainable if everyone did likewise – although people invariably felt that they were falling short of this. Such ideals can be adopted as a matter of personal virtue, 'integrity' or 'authenticity' whether or not a person is also involved in trying to stimulate more widespread change[1]. Several interviewees were deeply pessimistic about the future of the world, or else felt that change would only be precipitated by disaster, and yet still strove to reduce their consumption because they believed it was a 'better' way to live. As one said:

> *I suppose the logic behind the whole idea of living simply is if you use less of the world's resources for yourself there will be more left over for other people – which doesn't really follow in this society in that way. It's more of a statement of intent and belief than anything else, perhaps an expression of how you'd like to see the world go: people in the West generally consuming less.*

The importance attributed to living simply in itself, rather than as a means to significantly reducing ecological impact or stimulating social change, can be seen as a reaction to strategical political methods, even those of the Green party, pressure-group campaigns and charities of which some producers have direct experience. The perceived problem is not just that laudable ends are sometimes taken to justify dubious means[2], it is that ends are often not, in fact, achieved – so if the means were not also worthy there will have been no benefits. Worse still, concentrating on distant goals may distract attention from the possible adverse side-effects of any means used to get there. Some producers have become jaundiced with this whole way of operating and have chosen instead to concentrate on getting things right in the present and on a small scale.

Living simply is a more extreme aim than that of 'green consumerism'; rather than merely seeking out products that do the same job with lower environmental impact, people minimize their purchases of even 'green' products. With tools and household appliances

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1 Compare this with the section on *Global Sustainablity* in Chapter 5 – in which I discussed the fact that many producers admitted to being confused and lacking in knowledge about worldwide problems of food supply and changes in agricultural methods. 'Really organic' producers are distinguished by making what they feel to be appropriate changes in the way they live, even in the absence of certain knowledge, rather than simply expressing despair about distant problems.

2 For instance, as one farmer said, there is a contradiction between the needs of the democratic process and travelling: "If you're going to meetings to represent churches or farmers or whatever, that's a good thing, but the miles you travel in the car, or the cost of the rail ticket to London or whatever, just seems to be out of all proportion to what good any one person can do getting there. The amount of money my wife's spent on travelling down to London to meetings, all expenses paid, it's enough to make anybody question giving to charity or to the church. You just say, well I thought my money was going to help people, starving people or something useful, not rail tickets."

this can mean making do with what you've got, looking after things so they don't break or wear out, mending and making things yourself, or buying second-hand. One farmer who had inherited this attitude from his parents told me:

> *The agonies I go through before I buy anything new is really quite painful; when I'm out I could happily go shopping and never buy a thing. In fact, to come home without buying anything is a triumph over modern industrial society!*

As discussed in chapter 5, there is also widespread concern about the use of fossil fuels and, particularly with 'really organic' people, this concern extends beyond the farm or garden to people's home life. They feel guilty about using electrical household appliances, and sometimes deliberately do without; many also heat their houses with wood-fired stoves. However, and perhaps surprisingly, only a couple of my interviewees were seriously concerned about energy efficient housing design; most of them seemed to feel that they had enough on their plate with their outdoor enterprises. Also, none of the 'really organic' people I interviewed managed without using a car or van – although many of them felt guilty about it, and a few used their vehicles only to deliver produce.

Producers who advocate voluntary simplicity are generally tolerant of the inevitable backsliding, in others and in themselves. As one interviewee said: "you don't have to be purist; caring a little is better than not caring at all". A lack of agreement within families quite commonly forestalls change, and people also adapt to circumstances. Children often make a difference, as this man explained:

> *In the past I've been very strict with myself about my impact on the world generally – you know, not using electricity much, that sort of thing: living a more simple lifestyle. I suppose I'm more pragmatic now. Having children around it's too much effort; clothes need to be washed.*

And a long-time farmer reflected that:

> *In the end I got a bit older and I got tired of arguing and being thought to be greedy or mean or queer or something. I don't hang onto it quite as tightly as I used to, I let go just to live, but I still have my own personal standards of what I consider acceptable.*

Living simply is not the same thing as being poor[1], although the two often coincide; one grower said rather ruefully, "being poor is a consequence of growing, rather than an ideal in itself". Regardless of whether or not they choose to live simply there are many organic

[1] One grower made a distinction, between 'healthy poverty' and 'the other kind' – that of the Third World.

producers who are frustrated by not having money to spend on basics such as stock fencing or polytunnels, and people are often forced to make economies in their social and domestic life which have no ecological benefits: for example, the family of one interviewee lived in a caravan in the back garden for several months every year so they could let out their house. Nevertheless, people who choose to live simply undoubtedly find it easier to put up with the low incomes associated with small organic holdings[1].

Integrity of lifestyle

'Living well', for 'really organic' people, is only partly a matter of lowering one's consumption. For one thing they are often also 'green consumers' in the sense of choosing carefully what they do buy: from environmentally-friendly household cleaners and recycled paper products to the organic cotton T-shirt which one woman had ordered at exorbitant expense to support the cotton growers in America. However, I detected a certain cynicism about 'green consumerism'; people felt that their time and money was perhaps better spent on their own plot of land than chasing around shops after the 'right' product. Furthermore, not all 'really organic' people consistently buy organic food; among their reasons are that they prefer to support local shops, that they resent supermarket pricing and treatment of goods, or simply that they cannot afford it[2]. On the other hand, several interviewees were involved in co-ops which bought organic dry goods in bulk for distribution to their members – a self-help system for avoiding high prices and getting things delivered to areas where they would otherwise be unavailable. Growers who sell direct to the public also often retail organic wholefoods and thus are able to buy them at wholesale prices for their own households – indeed, this can be the reason why they start to sell wholefoods.

The ethical concerns about what to buy and what not to buy can become incredibly complex, but again my interviewees stressed that while it was important to be aware of the issues they did not feel obliged to be slavishly virtuous. One farmer told me that she didn't think there was any moral justification for eating marmalade (because citrus fruit has to be imported) although she did so because she liked it. So, they made their own marmalade, and used organic oranges because of the danger of pesticide residues in the skin. However, when she occasionally bought oranges for eating she was not prepared to

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1 See Appendix 1, Figure 7 for table of acreage against organic turnover (n.b. this does not take into account other sources of income).

2 See discussion in 'health' section of Chapter 5.

pay the organic premium given that the health risk was lower. As a grower in the same area explained:

> *My over-riding ideal is that we should all care – about everything – and not be so selfish, as some people are now. So long as they get their pay packet, so long as they have the things that they want then that's fine, and perhaps they'll send five pounds to charity so that somebody else can get on with it. But they don't think all the time, all day, about the best way to be doing things. I don't want people to be guilty – 'oh dear I shouldn't really be using this plastic bottle because it's plastic and what am I going to do with it when I've finished with it' – I think that the ideal world is where everybody is fully aware of their place in the world, and what they're doing and why they're doing it. I know my place, now.*

'Really organic' people are characterised by intuitively and/or thoughtfully seeking ways of living which feel right to them and which are 'integrated' – in the sense that if they feel that something is important they will acknowledge it in all areas of their life: home and work, family and friends; rather than compartmentalizing and having dual standards. Berry summarises this in the aphorism "if we do not live where we work, and when we work, we are wasting our lives, and our work too" (1977: 79). Of course, this does not mean that people always succeed in acting on their concerns, and producers certainly do not all agree with each other. This is particularly evident in the context of meat eating.

By far the majority of my interviewees were at least occasional meat-eaters. Those who had vegetarian tendencies usually seemed to have acquired them before moving into farming or growing, and some such people were now happy to eat meat if they "knew where it came from": usually their own animals or wild-caught ones. None of those I interviewed were vegan, although one person indicated on the survey return that they were practicing veganic (vegan-organic) growing methods. People with agricultural backgrounds typically saw little sense in vegetarianism and some vehemently opposed it – not least because livestock are an integral part of organic agricultural systems as currently practiced.

In *Meat: a natural symbol* Fiddes suggests that eating meat has long been symbolic of successful human domination over the natural world. Conversely, vegetarianism has become a popular way of symbolically (and often unconsciously) taking a stand against excessive abuses of human power over nature (Fiddes 1991: 226-7). This interpretation is illuminating in the case of people who are divorced from nature and from the experience of rearing and killing livestock – such as those city-dwellers who only subsequently become organic producers. However, both eating and avoiding meat can be philosophically integrated into a 'really organic' lifestyle in ways which challenge human domination of

nature: unlike city-dwellers, farmers and growers can choose whether to protest against human domination of nature by refusing to *consume* nature in the form of meat, or whether to re-define what is going on at a symbolic level and, by killing animals for their own consumption, *participate* in the natural order of things. Most argued for the latter, in terms such as:

> *I can't see any benefits for anybody in becoming vegetarian... the whole of nature operates on the basis of killing and being killed, eating and being eaten, and I don't think that there is anything inherently wrong in that.*

And:

> *I do not understand the vegetarian argument at all; nature to me is predominant... to restrict themselves to a vegetarian diet is denying nature – unless they believe that we were designed as herbivores, which I don't believe we were.*

My vegetarian interviewees tended to explain their choice in terms of global resource use, and often tempered their own conviction by saying that the main thing was to eat less rather than stop altogether. They also implied that *never* eating meat was a personal choice rather than a moral statement; they made reference to feelings such as "being sorry for" the animals or not being able to "bear the thought" of eating them – feelings which they did not necessarily expect others to share[1].

It is worth comparing some of the patterns of argument about meat-eating with those about hunting and shooting for sport which were discussed in chapter 5. Although 'really organic' people who eat meat do stress the importance of killing the animals themselves, or at least being capable of doing so, few shoot for sport. Like the vegetarians, they are usually chary of condemning others for doing so, although one incomer farmer did say that it was "a bit like going to watch the hanging!" Killing for fun rather than as an integrated part of providing for oneself can be seen as being as alienating[2], though in a different way, as the experience of those who eat meat and yet are not prepared to kill it themselves.

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1 Meat-eating and vegetarianism are live issues within the movement – see the letters pages of *Living Earth* 173: 30-1. Among consumers, buying organic produce is associated with vegetarianism (Organic Farming Centre 1991: Vol 2, 33-9)

2 Notwithstanding the quote in chapter 5 in which a farmer claims that those who shoot "have a much broader view of how dependent every little bit of nature is on another bit of nature; in nature everything lives on something else, nothing is wasted"; 'really organic' people are experiencing this in a way which is less stage-managed, and therefore rather scorn its formalised expression in social 'shoots' where the birds have in fact been reared in captivity and are often not eaten by the sportsmen.

Finally; an example touching on the extent to which 'really organic' people weave together, or integrate, ideas about their lifestyles:

> *Factory farming is definitely got to be out the window; nobody can have anything to do with that in efficiency terms or ethical terms, it's just not on. If I lived in London or somewhere similar I would be vegetarian but living here I've got my own produced stuff that I take responsibility to kill myself, so I don't see why there's a problem. We do specialise in re-converting vegetarians to omnivores! One thing that really pisses me off is the people that call me a carnivore because I eat meat. Carnivores eat exclusively meat; I'm an omnivore; there's a vast amount of difference. Being an omnivore is very efficient because you can make maximum use of what's available. People believe that if you don't eat meat then there's more food to go round: there's this thing about how many cabbages you can grow on an acre of ground and how much meat you can grow on an acre. Well, that's fine as long as it's a nice flat, fertile piece of ground. What if it's at 45° you know? You can't grow cabbages, the only thing you can do is grow sheep, or beef animals – it's the best output for that land.*

Basic occupation & solidarity with peasants

Another aspect of 'living well' is simply being involved in food production. Virtually all the people I interviewed, regardless of their reasons for producing organically, took pride in working in a primary industry – and, moreover, one which supplies what is arguably humankind's most fundamental need. This sense of pride is doubtless also common among conventional farmers, although people who had converted from conventional to organic sometimes told me that it made a considerable difference to be growing produce which was in demand rather than feeling that they were just contributing to EC surpluses. However, 'really organic' people tend to derive a sense of their own worth not just from being food producers, but also because they are relying on their own physical labour: "working in a 'basic' environment at a 'basic' occupation" according to one survey respondent. Another explained in more detail that farming and growing organically is:

> *An honest occupation, income related to labour expended on producing a primary commodity in a way which harms the planet as little as possible. This in contrast to a large number of people who earn high wages/incomes, very often living off the 'back' of those involved in primary production or living off the exploitation of finite planetary resources.*

Business "men in suits" are particularly castigated, both because they represent the system that 'really organic' people are challenging and because they are seen as receiving a huge amount of money for doing things which are more damaging than beneficial. They are also scorned for not having the practical skills necessary to look after themselves without the

back-up of modern technology and service industries[1]. Only a few organic producers seriously anticipate the sort of social breakdown that would cause people to live or die according to their ability to grow their own food and provide other basic needs, although one couple did use this as a justification for teaching their children about ecology and alternative technology at home rather than sending them to school. Businessmen and 'yuppies' epitomise those people who have no experience of 'honest work'; but the conclusion is more often that they are therefore out of touch with what it means to be fully human in the present, rather than that they are potentially incapable of surviving some future holocaust.

The self-sufficiency movement, which peaked in the seventies but has had a continuing influence on small-scale organic producers, encourages people to do everything for themselves and thus is open to being interpreted as a survivalist approach, although this is not explicit in the literature. However, as well as seeing it as "almost impossible in modern-day living", contemporary organic producers are wary of the 'jack of all trades but master of none' effect – which can undermine any possibility of real craftsmanship. Although 'really organic' people like being able to produce food for their own consumption, and some welcome the variety and sense of independence which a self-sufficiency approach can generate, most find it unsatisfying because they do not have time to specialise and do one thing really well; it also necessitates a very wide range of equipment and tools which are only occasionally used. The organic producers I spoke with tended to favour some specialisation, both in growing – particularly cropping agreements within co-ops – and in craft skills. When 'really organic' people stress the importance of basic skills it is not the degree of self-reliance in a person's lifestyle that is important, so much as a proven ability to work directly with nature or a natural material. Technological or business skills are generally appreciated if they are put to good use, but they are not thought to contribute to a person's self-development in the way that 'basic' ones are. To understand this bias it is necessary to remember the significance which 'really organic' producers attribute to developing a relationship with nature (Fischer 1982: 231).

Through working intimately with the land, and valuing basic skills even if they in fact shortcut the necessity for using some of them (particularly by employing power tools and tractors), 'really organic' producers often develop a sense of solidarity with the peasant farmers of developing countries. Admittedly there is a danger, especially among people

[1] Indeed, one wonders if some businessmen are not themselves concerned about this – witness the current popularity of 'survival' courses as management training programmes.

who have little direct experience of contemporary peasant societies, of the image of a peasant becoming simplified and idealised until it is little more than an agricultural version of the 'noble savage'. Nevertheless, for many 'really organic' people it is true that, as one farmer said with reference to Ghana, "the kind of way we live is much more normal there".

There can be political and ideological reasons for emphasising a sense of fellowship with peasants the world over: one survey respondent wrote that they produced organically partly because it was "affirming agricultural methods from other cultures and learning from them" – implying that such cultures should be respected rather than treated as problematically *under*developed. This is the central remit of the *Farmers World Network*, to which some organic farmers belong although it is not committed to organic methods. The *Network*, and many organic producers, recognise that even if the techniques of organic agriculture are accepted as beneficial as a long-term principle they can, in some circumstances, conflict with immediate survival needs. For instance, peasant farmers in the highlands of Ethiopia recognise the virtues of dung as fertilizer, but it is also used for building and, in the absence of other fuels, for cooking and heating. In straitened circumstances, ash from dung fires is all that remains to be spread on crop-land (Pankhurst 1992: 92).

Local is beautiful

As already discussed, few organic producers aim to be self-sufficient, and even farmers who try to run 'whole farm systems' buy in fertility to compensate for the fact that human excrement is not returned to the land. However, there is a strong presumption in favour of local trading and the use of local resources which is, in some ways, an extension of these ideas from the farm or holding to the local community.

'Really organic' producers give several sorts of reasons for trading locally, the most obvious of which is reducing the fossil fuel used for transportation – although it is not in fact always the case that commodities produced further away have been responsible for more fuel use. For instance, supermarkets notoriously move produce hundreds of miles to be sorted at depots before returning it for sale in the area of production, and early British tomatoes, even organic ones, may have been grown in heated greenhouses in order to compete with imports.

The fact that it is difficult for both producers and consumers to find out about, let alone control, how goods are treated by middlemen is itself a reason for favouring local trade.

For example, organic producers purchasing inputs such as seaweed fertilizers or rock minerals are typically distanced from their source and do not know about the effects on the coastline or mining areas, whereas people buying manure direct from nearby conventional farms can, and sometimes do, ask about such things as how the stock were housed and whether antibiotics were used routinely.

One grower claimed on their survey return that "organic growing is the only way forward for food production that does not plunder distant resources and makes maximum use of local ones". Of course, many people 'plunder' their local resources, but it is difficult to ensure that the distant resources one is drawing on are treated responsibly even if one has the will to do so. One approach is for producers to rely on bodies such as the Soil Association to research the effects of extraction of agricultural inputs and lay down regulations or guidelines about their use; similarly, as consumers, 'really organic' people could rely on magazines such as the *New Consumer*. However, they often prefer simply to maximize their reliance on local, rather than distant, resources – both for their farming and growing, and in their household life. 'Local' in this sense may not be spatially nearest: it also implies buying as directly as possible from the original producer. This is rather a sweeping solution, but it has the advantage of being a clear principle to apply, and people also justify it on the grounds that lack of accountability is intrinsic to the trading system, rather than an avoidable side-effect, particularly where large companies are involved[1].

For some 'really organic' people, favouring local produce means more than choosing British rather than Californian apples (organic or otherwise) when both are available; they advocate eating seasonally as well:

> *There's a lot of things grown in developing countries just to give us a bit of choice, or something out of season, it's part of this transporting business again. People can't wait for a thing to come in season, they have to have it all year round, and that occupies a lot of the best land in a lot of developing countries.*

Although most 'really organic' people approve of eating seasonally in principle they virtually all buy some things out of season, particularly in the 'hungry gap' of late spring. The personal benefits of doing so are high, and refraining goes virtually unnoticed as a political gesture. In addition, a few of my interviewees worried that although it makes

[1] For further discussion of these issues see the section on marketing in this chapter, and that on economics in chapter 7.

sense ecologically, eating seasonally conflicts with dietary advice to eat fresh fruit and green vegetables throughout the year.

A few 'really organic' producers use only negative explanations, such as minimizing fuel use and making it easier to detect exploitative practices, to justify trading locally and eating mainly local produce. Most, however, also have a positive vision, like the survey respondent who described sustainable agriculture as "developing agricultural systems appropriate to each region's particular situation, be it climate, economic, or otherwise" – an idea which a few people label as 'bioregionalism'. With or without the label, the intention is to cherish the special characteristics of different regions, geographically, culturally and agriculturally. A grower responding to the survey stressed the importance of particular knowledge: "being in tune with the environment – watching nature and learning about weather conditions, soil and your own land possibilities", and Berry writes: "The land is too various in its kinds, climates, conditions, declivities, aspects, and histories to conform to any generalized understanding or to prosper under generalized treatment" (1977: 31). The same can be claimed of communities, and on this basis, having a local cheese, beer, or type of bread is valued as reinforcing local identity. One farmer said that he was:

> *... always surprised at other people's mobility and readiness to sort of chuck things up and move on. The properties which have been in the same family for six or eight hundred years have this certain sort of feeling about them. You don't let go of that sort of thing lightly, and responsibilities to particular sorts of things like trees, which are such long term ones, do have a value.*

People who are mobile, like those who buy a new brand of cheese in the supermarket each month, are seen as alienated by not 'belonging' to a particular area of land as well as being distant from natural forces in general.

Sowing Seeds of Change

There are many ways in which 'really organic' people try to "cause ripples in the pond" as one interviewee put it. Some people are forthright, like the market gardener who wrote on the survey that they wanted to "convince others to change society not just to accept the status quo". Others are more diffident about claiming to know what is best for other people and hope to be influential by setting an example by their choice to live in ways which they feel are fulfilling and morally worthy. There are also, of course, some

crusaders among those who are involved in organic farming and growing without being 'really organic': they may champion the benefits of organic methods for wildlife, health or the condition of the soil (Fischer 1982: 232). However, this section will continue the theme of the current chapter by focussing on 'really organic' people, and specifically those who are trying to stimulate changes in other people's worldviews and lifestyles.

It is noticeable that most 'really organic' people have little confidence in the effectiveness of top-down solutions to the problems that concern them. In any case, many feel that it is unrealistic to expect substantial government support[1]:

> *We're not going to change overnight; it's daft to think that one British government is going to say 'hey man, we're going to change man, we're going to grow organically'. Let's suppose Charles becomes king, he's not going to say: 'all ye subjects will be organic'.*

The more cynical producers point out that organic methods will never gain favour with a government because of the vested interests of agrochemical companies. Such companies are completely by-passed by the cyclical nature of organic methods, and organic agriculture has no industrial champions because it doesn't support a supplying industry.

Political will is not the only issue. Some 'really organic' people see the state as "basically uncontrollable", and that the potential for change is determined by the mood of the people rather than by legislation, although changing public attitudes is generally accepted as being a slow process, spurred only by disasters. As the grower quoted on the government and the monarchy continued:

> *It's all going to be very gradual. Unless we get a few more Gulf wars or something: if a nuclear power station explodes in this country then I reckon nuclear power's out of the window – that'll be that, knock it on the head, son. We'll all be into wave-power or something, but it'll take something like that... If there's another cancer scare, from a chemical found in potatoes, say, then things'll change.*

Most 'really organic' people are not dedicated to creating some future utopia. I tried asking people right at the end of interviews what their ideal vision of the future was, but they found it hard to answer. They preferred to concentrate on immediate concerns rather than get carried away with grand visions and, significantly, they tended to think that what is needed is individual, personal, change rather than top-down alterations in social structures. This consensus about the need for personal change means that people feel that

[1] See chapter 7 for discussion of government support for organic production under the EC-initiated Agri-Environment Programme.

they are effective ambassadors for their beliefs even if they do nothing more than occasionally give hospitality to friends who would not otherwise learn about the functioning of a composting toilet and how to make do without a fridge or, indeed, would not otherwise discover that organic people are not Luddite on principle, but rather that they judge machines and technologies on their merits and demerits – including ecological ones.

Individualism

When I asked 'really organic' producers what neighbouring farmers made of their ideas, some said they were thought to be a bit crazy, or hippies, or "playing at it", while others said that their neighbours were interested and curious. It was noticeable that the 'really organic' people were less sensitive to the opinions of their neighbours than those who produced organically without adopting it as a way of life – a few rather revelled in being regarded as odd. Incomers also tended to be more outspoken than people who had grown up within the community. One self-styled pioneer of the movement was pleased that farmers had begun to "stop and talk to us about what's going on, and give us the respect that we've always wanted", but he gave no indication that he had been inhibited by public opinion in the past.

One aspect of this individualism is that 'really organic' producers, unless they are bio-dynamic, tend to be guided at a philosophical level more by what they personally feel to be right than by the policy of the Bristol organisations, or indeed any other organic body. The effect is somewhat anarchic, and at times the only centripetal force seems to be the practical advantages of a recognised set of standards. Indeed, several aspects of these have been the subject of prolonged debate within the movement as a result of people's differing priorities – a prime example being whether it is better to use manure from intensive poultry systems if they happen to be nearby, or to use fossil fuels to bring in manure from ethically acceptable, but more distant, sources. The use of plastics, peat, and conventionally raised seedlings are also all simmering issues.

There are several long-running clashes of approach and personality at the very core of the British organic movement, but these serve only to highlight an ambivalence which is apparent at every level. 'Really organic' people tend to have derived their certainty

from experience rather than a shared creed[1]. Inevitably, therefore, they sometimes find themselves arguing in opposition to each other. Moreover, the strong personal opinions of organic producers can lead them to be intolerant of bureaucracy and hierarchies – in organic organisations as in any other. For instance, although organic people might be expected to support co-operative ventures, and despite the existence of several successful producer co-ops, many producers choose not to join them on the grounds that they do not want to relinquish their independence. Furthermore, organisations such as the Soil Association and BOF/OGA, which try to present a unified front in promoting organic agriculture, are hampered by the individualism of producers, although at the same time they are utterly dependent on their courage and conviction.

In discussing the ways in which 'really organic' people hope to stimulate change I have chosen to concentrate on what they hope to achieve as individuals, rather than as a movement. This is in line with the approach of the rest of the study, in focusing on producers as individuals rather than on the organisational structure of the movement. However, this approach is particularly appropriate here because the central organisation might have been expected to play a more active role than producers in fact acknowledge – as indicated in the discussion above. A complicating factor is that a significant minority of organic producers are partially employed or voluntarily involved in organic organisations – although those I interviewed who were in this position seemed resigned to not always being able to reconcile official policy with their own opinions.

Community

'Really organic' people generally feel themselves to be part of a dispersed organic network, or community, as well as having local connections. For many the organic network is extremely important for exchanging information, developing a sense of identity and common purpose, and not least for building up friendships with like-minded people (Fischer 1982: 234). A few of those I interviewed also considered themselves part of other dispersed 'communities': they attended various 'alternative' gatherings or courses, or simply had a nucleus of friends in an area where they had previously lived. However, in their local communities organic producers usually find themselves in a minority as regards their organic ideals. This may, indeed, make the support of dispersed networks all the more important.

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[1] Fischer, in his study of 100 German-Swiss organic producers, found that they themselves thought that a capacity for keen observation and for independent thinking were the most important qualities for farming organically (1982: 242).

It might be expected that organic producers would be evangelical in their relationships with local farmers, particularly since, as described in the previous section, 'really organic' producers are generally not inhibited by public opinion. However, most of my interviewees were more concerned to get on well with their immediate neighbours than to convert them, Any suggestions they made were evidently either gentle or half-joking, unless relations were already soured by some major controversy such as spray drift. In particular, farmers who convert often want to minimise the criticism of neighbours which is implied by their choice to use organic methods. Nearby farmers are in any case almost certain to observe closely the performance of a farm in conversion; indeed diffidence about arguing for organic methods can be due to fear of the inevitable occasional disaster which can be highly visible – a problem which is more common with farms than market gardens.

For some 'really organic' people, participating in the local community is part of their organic philosophy, and strengthening bonds within the community is as important as getting people to grow, or eat, organic food:

> *I used to work away from the community, not having much to do with them except in the evenings or possibly weekends – I'm part of it now, growing organically and selling in the same town. I'm a community service. I get paid by the government [ie, receive family credit] to produce vegetables for those few people in the town who really, really want them. We have a market stall which is like a little meeting place, people know each other and they come out and it's all part of the – as it were – caring community.*

Others worry that parts of the organic movement are in danger of losing all sense of community:

> *I used to go to this wholesaler, and it was a cup of barleycup or cup of tea. But you go to these new places and the stress and the tension there is! Not between us and them, but the fact that they're doing their work – you can see the stress and the tension – it's business.*

'Really organic' people are often deeply concerned by community issues which are not unique to an organic viewpoint, although they may consider them to be integral. In particular, there is a widespread desire to have more people working on the land and able to live locally. Incidentally, the employment potential of organic agriculture has not been extensively promoted by the Bristol organisations, although it can be important for producers, particularly those with family roots in an area[1]. It has, however, been used as

[1] Organic horticultural production does require more labour than conventional, although primarily arable farms may decrease their labour requirement by converting as there is little work for tractor drivers between the sowing and harvest of cereals.

a campaigning issue by the SAFE Alliance (Sustainable Agriculture, Food and Environment). A couple of my interviewees recounted at length how the way they ran their farms had been determined by their desire to promote local employment: in one case by having the faith to give a job to someone who was considered unemployable, and in the other by always using a friend for contract work despite the limitations of doing so.

Visitors

Most small organic holdings, and a few of the larger ones, are host to volunteer workers, under various arrangements, including WWOOF. This is an important form of 'outreach' for the organic movement, as it gives interested people from the city a taste of living organically and doing 'basic' work in close contact with nature. This is assumed to be psychologically beneficial for volunteers who may be alienated from nature by urban lifestyles. It also gives organic producers the opportunity to "educate other people in finding better ways to live" as one smallholder wrote in the survey. This can mean encouraging them to buy organic, in season, and generally to live more simply. Some WWOOFers even end up becoming organic producers themselves. However, in terms of the work they do, short-term volunteers can be a liability, occasionally causing serious damage and always requiring supervision and encouragement. 'Really organic' producers nevertheless tend to regard hosting such visitors as important:

> *A lot of people come and spend times here because they want to get away from what they're doing or they want to do something fresh or whatever, and that's a positive thing which the farm can offer – it's another 'crop'. It's a funny thing to say, but it's part of the ethos of the place.*

And a grower commented that:

> *Some of them really can contribute a lot, some not quite as much. But you feel that for what you get out in the way of help, you have to put in a lot: to help them, to show them, to explain. It's part of it of course, but it's a job in itself and it takes away from other work you should be doing. I like it, I don't for a moment say that I don't. I appreciate having them: wonderful new ideas and new people. It keeps one alive: you don't always stagnate with the same problems if you meet other people's. The question is how you practically allow this social meeting with others and yet get through the work.*

Long-term volunteers can make a more significant contribution in terms of their labour than occasional visitors; indeed, some market gardens would be unable to operate at all without volunteers prepared to spend a full year or the summer months working for bed and board –

and occasionally pocket money[1]. Some of the volunteers are otherwise unemployed and want to be doing useful work; some have chosen to have a career break and are taking the opportunity to spend time in the country learning about organic growing. A few explicitly see it as an apprenticeship before becoming organic producers themselves. Volunteers are assumed to be benefiting from the experience of working in an organic context, even though they are only minimally rewarded in material terms; certainly, there seems to be no shortage of people prepared to volunteer. Problems sometimes arise, however, when they stay for several years – by which time their learning curve has levelled off. They often begin to feel that the work they have contributed should have earned them the right to be consulted in decisions about the running of the farm or garden. Sometimes volunteers even want to set up a co-operative working structure – an idea which independently-minded organic producers who have built up their holding from scratch usually find difficult to accept. While working on organic holdings I was witness to a couple of confrontations which stemmed from such differences in perspective.

Experimental holdings

A recurrent theme in answers to the open-ended survey question was that people found farming or growing organically a 'challenge'. Even those people who do not try to *live* organically often gain satisfaction from rising to the challenge of experimenting with techniques of organic production (Fischer 1982: 233), and some try to set an example to others by hosting farm walks – often organised by BOF. Many such producers see themselves as running experimental holdings simply because they are organic, but in the context of 'really organic' people, organic production is the orthodoxy[2], and experimentation implies trying out more esoteric ideas.

Permaculture has been discussed previously in the context of the value-system it embodies. Permaculturalists are a prime example of people trying out new ideas, not primarily for their own benefit, but as on-going research. Good ideas are passed around the network so that they can be tested by people in different situations. The whole thrust of the

[1] Market gardens often have one or two paid workers plus volunteers, and the more professional ones make use of paid seasonal labour, but there are many on which the income from sales would simply not be able to cover wages for all the people working there.

[2] One of my interview questions was "Do you think that organic agriculture can be financially viable?". Once, when interviewing a bio-dynamic grower, I adapted this by referring to bio-dynamic agriculture rather than organic with the result that he responded by referring to the market for organic produce as a bench-mark for assessing the potential of bio-dynamic – without even thinking to mention conventional produce.

movement is experimental: finding out what will work, rather than concentrating on immediate productivity.

There are also individuals who are developing particular techniques or ideas without being part of an extensive network. These range from foggage, a system of permanent grass management which obviates the need to make hay or silage, to radionics, which uses electromagnetic 'energy' for promoting the ideal conditions for soil and crop health. There are one or two people running organic farms using draught horses, and some people rely on dowsing for making management decisions and prescribing homoeopathic remedies. Typically such people feel, as a woman who was growing veganically wrote in the survey, that they are "pioneering – showing the way forward – hoping that others will follow".

For some such pioneers it is not enough to experiment in the present: they arrange to leave the land they own in trust so that the work can be carried on after their death – sometimes even by-passing their own descendants, which is a measure of how important they consider their work. It is also not uncommon for people to claim, like this survey respondent, that the important thing was to "educate both the government and the people about organic farming". A few put this into action by setting up their farms as training and demonstration centres, offering short courses in organic agriculture and often in other areas such as crafts, alternative technologies and even spiritual concerns.

There are also various communes and 'intentional communities' around the country which are experimental, or at least unorthodox, in terms of their social structure, and which have adopted organic practices. Many of these are not registered as organic producers, as they are growing mainly for their own consumption – and for visitors. Judging from the literature emanating from such places, many see themselves as pioneers. Conversely, a few have developed a lifestyle which suits them and have no evangelical ambitions. It was beyond the scope of this study to research such places systematically, although I did visit a couple which had the Soil Association symbol.

As previously noted, there are some religious communities which produce organic food for their own use, and it would be particularly interesting to explore the connections they make between their faith and their use of land. There is also an extensive network of anthroposophical communities which grow vegetables bio-dynamically and sometimes have farms – partly in order to be self-provisioning, but also because it is seen as a fulfilling occupation for the mentally handicapped 'trainees'. It would be interesting to study the reasoning behind this assumption, and to compare the bio-dynamic approach with other examples of working with the land as a route to self-development – for instance

there are some places where organic gardening is used as a therapeutic activity for people recovering from mental illness.

Purity and Pragmatism in Marketing

Although using organic methods can release people from the pressure to buy agricultural inputs, and some organic producers choose to withdraw from 'the system' in their personal lives, marketing produce is an unavoidable interface with the outside world for all commercial organic producers. For people who are farming or growing organically without being personally converted the issues are purely practical and pragmatic. This is not to say that it is easy to make decisions such as whether to make an investment in packing machinery in order to be able to sell vegetables to a supermarket – who rarely give the security of a contract – but for 'really organic' people there are additional ethical debates. Even those 'really organic' producers who are primarily concerned with 'living well' rather than 'sowing seeds of change' find themselves forced to consider the impact of their choices on both potential and existing customers.

This section will focus on the marketing of organic fruit and vegetables, as the ethical debates are most clearly visible in this area. Marketing organic grain has historically been easy and has offered a considerable premium[1]. Most grain for human consumption is sold in bulk to merchants, and both the convenience of this and the scarcity of alternative sale routes means that there is little debate about it, although a few producers take pride in selling to local watermills or windmills. With regard to the meat market the "vast majority" of organic meat is sold through supermarkets (*New Farmer & Grower* 38: 23), and the rest is sold direct from farm shops or through independent retailers. The meat market is much more recent and less developed than that for grain or vegetable products, and it has been dogged by so many practical and organisational problems[2] that ethical concerns, other than those of animal welfare[3], have tended to be overshadowed. Organic dairy produce is also marketed in a small way: raw milk, and organic cheeses and yogurts – some of which are processed on-farm and marketed by the producer. I shall not discuss this separately as most of the marketing issues are parallel to those which arise in the context

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1 See chap 7 for discussion of the impact on the organic wheat trade of the EEC Regulation (1991).

2 As the *New Farmer & Grower* reported in 1993: "Unfortunately, the specialist marketing of organic livestock in the UK has suffered a chequered career and is still plagued by some ill-feeling among producers." (*New Farmer & Grower* 38: 23).

3 For discussion of these, see animal welfare section in chap 5.

of vegetable produce. There is also a considerable trade in imported goods and in processed organic products; the latter ranging from muesli to beer and from ketchup to Christmas puddings.

The way in which produce is marketed is sometimes seen as undermining the benefits of the way it was grown. As one grower complained in the context of selling through supermarkets: "it's not organic, not what it's all about: pre-packed, graded out, wrapped in plastic, transported half way across the country". Another interviewee admitted, however, that selling in bulk to supermarkets has advantages, despite his conviction that "being the local supplier is part of being organic":

> *I like the money, it really made a difference this year. It was the first time I deliberately sold to supermarkets, or deliberately grew stuff to sell to supermarkets, and it went well. It paid for the polytunnel in its first year and they took everything I could produce, and on top of that [a wholesaler] was asking me for cucumbers as well and I was having to turn them down. I really felt like I was in a good position. I was complaining about the price a bit to begin with, but then the price went up a bit, and I realised just how many cucumbers I was producing, and I thought this is OK.*

Besides providing a high-volume outlet for producers, another widely recognised benefit of supermarkets is that they make organic produce available to people who are not able, or do not want, to make a separate shopping trip to an organic farm shop or wholefood store. As previously mentioned, some consumers are intimidated by such outlets. On the other hand, producers often worry that supermarkets reinforce the idea of organic produce as a niche market; as a grower said:

> *I remember listening to some guy from Safeways saying that organic vegetables are like malt whisky, a sort of specialist part of the more generalised whisky market. I just fundamentally disagree with that. I think that all vegetables ideally should be produced organically as far as possible. All food should be produced organically.*

There is an unresolved tension throughout the organic movement about selling through the supermarkets. It is commonly expressed in terms of concern about freshness of produce, about fossil fuel used in transportation, over-packaging, excessive mark-ups (for instance, one grower recounted seeing his beans on sale for 87p/lb in a supermarket although he had only received 20p/lb for them) and the on-going hassle of what to do with out-graded

produce[1]. However, the fundamental debate is about whether or not it is appropriate to collaborate with big business interests[2]. As one researcher noted:

> ... in making the alliance with supermarkets, organic farmers have implicitly or explicitly accepted supermarket rules about packaging and the cosmetic standards required for produce. The belief in decentralised marketing and minimum use of fossil fuels have therefore been sacrificed to pragmatism. (Clunies-Ross 1990: 361)

Co-ops are also implicated in this debate, because the function of most of them is to provide the necessary link between small or medium scale organic producers and supermarkets, although they have the potential to market in other ways[3]. According to an enthusiastic member of one of the more successful co-ops, they can transform the lives of growers, enabling them to get on with the growing while the marketing is taken care of. Certainly, for those producers who want to grow for the multiples, co-ops have advantages over the alternative of selling produce through independent wholesalers. However, some producers feel that selling to supermarkets, by either route, would be relinquishing responsibility for their produce. For example, one farmer fumed on the subject of supermarkets:

> *I do hate the places. They just symbolise the consumer society and come-and-get-me-there's-loads-more-where-this-came-from. Choice, choice... for God's sake how many choices do you need, or do you want; how many choices of cheese, or... ah, it just sickens me.*

Such sentiments are common among 'really organic' people. Providing 'consumer choice' is seen as largely negative, particularly because the variety and presentation of goods offered in supermarkets is thought to increase the alienation of consumers from the land:

> *One side of me enormously admires them for very well organised, brilliant operation... admirable, in many respects. On the other hand there's a down side to it, which is that quality control means that they would not mind at all simply sending back to a farmer a lorryload of carrots or something because they didn't quite measure up to the specification; too bad for the farmer, very nice for the supermarket, very nice for the consumer, if they*

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1 Packers sometimes reject half or even more of the produce sent to them; rejects are sometimes sold conventionally or returned to farms for animal feed or composting, but often they are simply dumped. This is also a major concern for the organic meat trade as carcasses outwith supermarket specifications for size and conformation often end up being sold as conventional.

2 It should be noted in this context that supermarkets do more than sell organic produce: Safeway and Sainsburys have sponsored organic conferences and events at agricultural shows, and have funded research.

3 For instance, the co-op Organic Growers West Wales supplies Organic Direct, a combined ordering system which delivers orders for individual customers to a series of distribution points along the M4 corridor (Pullen 1992: 11).

think they want that sort of carrot. But it means that farming has to be done on an industrial, unnatural and unreal basis. What supermarkets represent, it seems to me, is another great barrier between ordinary everyday people and the real world – the reality of things. They kind of bump up against reality at the supermarket counter, they can't really see beyond that. They don't have any notion of the consequences of their decision-making.

Producers are aware that even those consumers who seek out organic produce are more often doing so from self-centred motivations. Rather than wanting to support sustainable and environmentally sensitive agricultural methods, they are interested in the superior taste, concerned about the health effects of agrochemical residues, or simply responding to fashion[1]. To a businessman simply looking for a gap in the market this would not be a cause for concern, but 'really organic' producers are commonly frustrated that consumers can remain unaware of the wider benefits of an organic approach. 'Really organic' producers often choose to sell direct to the public – through a farm shop, a network of retail customers[2], or even by running a market stall – partly in the hope of 'educating' or influencing their customers.

Selling direct also fits in, of course, with the ideals of trading locally and promoting a sense of community, quite apart from the pragmatic advantage of cutting out the middleman. However, it is not uncommon for customers at farm shops to be oblivious of the organic status of the produce they buy. Many are customers simply "because the stuff is local and fresh and it's a slightly interesting place to come to – the children can see the chickens", and some are even put off by the exclusive and expensive image of organic produce which supermarkets have encouraged. One of the growers I visited was planning to remove the word 'organic' from the road-sign advertising her farm shop on the grounds that it was discouraging potential new customers. Once they were in, however, she had no qualms about facing them with organic posters and a notice saying that the holding was Soil Association registered, as she felt that the quality of the produce and her very reasonable prices would convince people to buy.

For producers, the main practical problem with farm shops is staffing them. Few can afford to have someone in a shop all the time; some open only one or two days a week and many operate a system whereby customers press a bell to call someone from the garden or the house. This inevitably disrupts whatever other work is being done, and customers can feel inhibited about dropping by for minor purchases. On the other hand, it can also make

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[1] See *Consumers and Marketing* in chap 2.

[2] According to information from the Soil Association, in 1991 30% of all their symbol holders had retail customers and 14% ran farm shops (11% did both). See Appendix 1, Figure 1.

it difficult to 'close' the shop – one grower had someone persistently ringing the bell on Christmas day because they wanted to buy eggs! Another common arrangement is to work on a trust system and simply display and price the produce, and provide a set of scales and a box for the money. Some shops work on a mixture of these systems, with people ringing for help if they need it and regular customers serving themselves.

A philosophical objection to farm shops is that people often make long car journeys to get to them. Running a delivery round for organic produce is a better option in this regard as it cuts down on the fuel expended to get produce to customers' homes and makes produce available to people without private transport. The difficulty with deliveries tends to be working out a system for people to place orders[1], and although this is at root a purely practical problem it can lead to people re-assessing the assumption that selling food means allowing people to choose individual items at a set price.

Several of the producers I interviewed had struggled with taking individual orders and making up detailed invoices for years before moving over to a system whereby they delivered an identical box or bag of produce to each household – sometimes offering one of two sizes. Customers sometimes indicate if they don't want certain products (and are usually given a bit more of something else instead) and individual orders for such things as cheese or eggs are sometimes added in. This not only cuts down on the work of making up consignments to order: the rationale is also that consumers ought to be guided in what they eat by what is available locally and in season – and the grower is in a better position to judge that than the consumer.

Some people who deliver standard orders calculate a price each week, while others have departed further from the normal model of directly exchanging money for goods and think in terms of their regular customers contributing a standard amount to the upkeep of the garden in exchange for a proportion of its produce. In this case the fruit and vegetables delivered may sometimes be worth more and sometimes less than the charge, but it is accepted by both parties as mutually beneficial in the long run. Such arrangements are relatively new within the organic movement and have undoubtedly been stimulated by the discussion of 'community supported agriculture'[2] in both organic and bio-dynamic publications. As well as the practical advantages for producers, these new ways of selling

[1] It is hard to do in advance because it is not always possible to tell what crops will be available, and having customers telephone in orders can be as disruptive as staffing a shop; on the other hand, for producers to telephone customers is both expensive and time-consuming.

[2] See chapter 7 for further discussion.

organic fruit and vegetables are seen as integrating consumers with the process of food production:

> *When new people ask [about having vegetables delivered] I like to bring them the thought that in the production of food we are all trying to produce food. It's not just myself, it's the responsibility of all of us. And it's a tremendous help to me if, as their contribution, if they can take it in: if I can deliver four or five bags to one house and the others can pick it up. That's a contribution they can make; another is if they make up their own bills and I don't have to do that paperwork. I would really like to feel that food production is something we could share – we all need food, and it shouldn't be just left to a grower because it is such a basic essential to life. To get people to come out and do it I think that's a little naïve, but some form of co-operation I think should be possible.*

The other main route for the sale of fresh organic produce is through independent retailers; both wholefood shops and, to a lesser extent, greengrocers. Typically, wholefood shops are supplied by one or more local producers and also by wholesalers who can offer them greater continuity and supply imported produce. Historically, such outlets have been crucially important for the marketing of fresh organic produce, although they have been somewhat overshadowed in recent years by the involvement of the multiples. Sales of organic produce through independent retailers are proportionally less important than they used to be, and the shops sometimes complain that wholesalers now give them what has been rejected by supermarkets. However, the handling of vegetables by both greengrocers and wholefood shops is usually compatible with the ideals of 'really organic' producers in that they do not grade-out produce and over-package, although slow turnover can mean that produce is not always fresh. Among the producers I interviewed, supplying local retailers was uncontentious: if there was a local shopkeeper prepared to stock their produce they would supply them, often with a good deal of loyalty. Some even co-operated informally with other growers to stagger the planting of things like broad beans so that a shop would have them for a longer season and both growers would get some of the trade.

Despite the high proportion of imported organic vegetables, a significant amount of British organic produce is sold without being labelled as such[1]. This is most often when producers have a glut and sell through conventional wholesale markets at reduced prices, but some growers routinely sell some produce without organic identification. One woman explained that a local greengrocer took her vegetables because they were local and of good quality, but removed the organic labels from the boxes when she delivered. This was

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[1] See section on *Consumers & Marketing* in Chapter 2 for details.

partly because they wanted to sell them as main lines rather than premium products and also because they didn't want customers to start asking questions about how other vegetables were grown. A different producer supplied a greengrocer in her local town but didn't identify the vegetables as organic because she didn't want them to compete with the organic market stall run by another local grower. He also sold her produce on his stall – as organic. The prices, however, were similar because she asked the same wholesale price from both of them.

The whole issue of pricing organic produce is highly complex. In supermarkets organic prices are consistently higher than conventional (Consumers' Association 1992: 28-9). This is partly because organic fruit and vegetables sold in supermarkets have to bear the cost of being packaged – so that they can be distinguished from conventional produce at the check-out. Handling costs per unit and wastage due to spoilage are higher because the turnover of produce is so much lower than that of conventional lines. Additionally, the wholesale prices of organic produce is often higher than that of the conventional equivalents. At another level, however, the premium on organic lines is because they are being marketed as a speciality products and therefore have to be differentiated from 'normal' goods by being more expensive. This makes the assumption that the price of organic food should relate to that of conventional and, implicitly, that consumers choose on the basis of price, whether to buy the organic or the conventional version of a particular product.

However, there are several rather different ways in which these assumptions are commonly challenged. Firstly, there is the behaviour of some dedicated consumers who do not, for instance, buy conventional tomatoes when organic ones are out-of-season and expensive, but buy organic cabbage instead and settle for coleslaw rather than tomato salad: they are comparing prices within the organic range, and the percentage premium over conventional is irrelevant. Many 'really organic' producers themselves take this attitude when they are shopping. Secondly, there are producers who feel a strong social responsibility to make good (ie organic) food equally available to all: they object to premiums on principle because this discriminates against people on low incomes – people who can only 'choose' to buy organic if the price is on a par with conventional. Thirdly, and conversely, there is an oft-heard argument for high prices, on the grounds that the British have got their priorities wrong, whether they are buying organic or conventional:

> *The trouble in England as opposed to the continent is, I think, that food isn't of primary importance: the video and the television, the new carpets and decorating the house, and off to the south of France – all come before spending money on food. The public don't think to set aside enough money to*

> *spend on food, particularly in the British Isles. Whereas in Italy, you eat first, and then if you have any money over... People in this country don't begin to understand what food should actually cost.*

And:

> *People are prepared to spend money on a Mars bar or on pints of beer and yet they won't spend it on vegetables because vegetables are traditionally very cheap. I think well, if people want cheap vegetables then that's what they're getting. If they want good vegetables then that's a priority people have to make in how they spend their money.*

Ideas about how to price organic food conflict because in setting prices 'really organic' producers are faced with the impossible task of linking their ethically based value-systems with the economic system of the wider world. When dedicated producers start to think about "what food should actually cost" the discussion quickly embraces all of the fundamental issues addressed in this chapter.

"Live as though you will die tonight"

To outsiders, being 'really organic' may appear puritanical and austere, but for those who are 'converted' many of the practical inconveniences are counterbalanced by the feeling that they are living – at least to some degree – sustainably and in an 'integrated' fashion. Beyond that, there is a noticeable determination among 'really organic' producers to get the best out of life: one grower even told me that he first became interested in the organic movement after playing at a barn dance for the Soil Association:

> *... that introduced me to a whole bunch of people and I thought well these people are having a great time, they seemed really relaxed and fun. I thought this is great, I want to get to know these people a bit more.*

Several survey respondents wrote things along the lines of being "happy to be farming in this totally honest way" and being able to "go to bed at night at peace with my way of life". One gave their aim as being to "make money, make tasty food, trust nature, make the dust fly – don't worry about killing a few worms before they get me!", and another offered the maxim: "farm as though you will live forever and live as though you will die tonight".

7

PANDORAS

7

PANDORAS

> Pandora, according to Hesiod, [was] the first woman that ever lived. She was made of clay by Hephaestus at the request of Zeus, who wished to be revenged on Prometheus for his theft of fire from heaven. When this woman of clay had received life, she was endowed by the gods with every gift, and Zeus gave her a box, which she was directed to present to the man who married her. Hermes then conducted her to Prometheus, but the sagacious mortal, distrustful of Zeus, sent her away. His brother, Epimetheus, less prudent, married her and opened the box, whereupon there issued from it all the evils and distempers that have since afflicted the human race. Hope alone remained at the bottom of the box to assuage the lot of man. (Oxford Companion to English Literature 1932)

Other versions of the myth blame Pandora for opening the box; some say that Hope, rather than being left behind, was simply the last thing to flee the box; and at times it seems that Pandora was herself the receptacle for 'evils and distempers' – according to one source Hermes endowed upon her the 'gifts' of guile and treachery. For the title of my concluding chapter I have adopted the word 'pandora' as a term for global problems which we would rather 'keep the lid on' – some of which are indeed beguiling, as they bear an element of Hope.

One reason why people want to keep such pandoras securely locked up is that once let out into our consciousness their implications can become overwhelming. I became particularly aware of this when listening to organic producers' responses to my interview question about

biotechnology: many of them simply didn't want to face up to it. In some ways this is an appropriate reaction: it means that people can get on with their practical work and with enjoying life. A few people undeniably do manage to effect change by meeting such issues head on, but for many it would prove futile and lead to despair.

I felt the need to include here thumbnail sketches of five relevant pandoras because each has the potential to undercut the best efforts of organic producers, 'really organic' or not, and some of them offer at least glimmers of hope. I have expressed the issues, as they are expressed by organic producers, with emotional as well as rational force, and with more concern for the overall pattern than precision of detail. They should not be read as objective summaries of the scientific, political or economic research in each area. The dogmatic tone serves to convey the ideas concisely – if I had started to hedge them about with references and qualifications each topic could easily have become a thesis in itself.

Abuse of Resources

Potentially, agricultural systems can recycle most nutrients, use legumes to fix nitrogen from the air, and provide the fuel (food) to support the necessary human and animal labour. Modern 'industrial' agriculture instead wastes human sewage (and often also animal manures), burns up fossil fuel to convert atmospheric nitrogen into soluble fertilizer, and uses still more diesel in running agricultural machinery. Photosynthesizing plants are natural solar energy collectors, and yet we now have the absurd situation where mainstream agriculture ultimately wastes much of the energy gathered by plants and meanwhile puts in 10 kilocalories of non-edible fossil fuel for every 1 kilocalorie of edible food produced (Hall *et al.* 1986: 125). At the same time, such agriculture leads to soil erosion, and agrochemicals disperse to pollute air and water.

Organic producers do use fossil fuels both in daily living and, typically, to power agricultural machinery. Even if they try to minimize their fuel consumption, they are part of a global society which is based on the use of fossil fuels, and their hopes and/or fears for the future have to be formed by the effects of other people's behaviour in this respect. Similarly with pollution: on a local level organic producers may have to cope with problems of spray drift and traffic fumes; on a wider scale too, 'no man is an island' and acid rain will fall on their land even if they have tried to minimize their contribution to its formation. The ground-water which is now being polluted by nitrates and pesticides will come out in people's taps, now and in the future, regardless of how they choose to live.

Pollution and profligate use of fossil fuel are widely acknowledged problems in comparison with the wasteful disposal of human sewage. At present it is common for nutrients in the soil, both those naturally present and those deliberately applied, to be drawn up by crops, pass through human or animal consumers and then be sent out to sea; where they are lost to the agricultural system and disrupt the oceanic one. Meanwhile, of course, we are mining phosphates and potash to apply to fields in replacement for what has been lost. Admittedly, sewage is usually processed: the liquid fraction is aerated so that it does less damage when released into waterways; but the solids are nevertheless often dumped at sea or – increasingly – buried on land, rather than being returned to the fields. Even the pressure from the EC to improve sewage disposal is aimed at reducing its impact as a pollutant rather than making good use of the nutrients and organic matter it contains.

Sewage sludge is commonly available free of charge to farmers who wish to apply it to their fields as a fertilizer. However, it frequently contains undesirable chemicals, in particular the persistent 'heavy metals'. Our sewage disposal system ensures that human urine and faeces are mixed not only with detergents and household cleaners but also with industrial wastes – everything from scraps of dentists' fillings and photographic processing chemicals to the products of heavy industry (many, although not all, industrial sites use mains sewerage). These substances can build up to levels which are toxic to growing plants, while some of them are taken up by the crops and thus enter the food chain. Indeed, the EC regulation on organic food production does not permit the use of sewage sludge on organic land. Soil Association, even prior to the EC ruling, and although aware that returning human sewage to the soil was imperative in terms of sustainability, had strict rules governing its use because of the contamination problem.

Pressure from the EC has stimulated more imaginative consideration of how sewage can be used: there are now large-scale experiments with both bio-gas and composting as well as incineration, but as yet there is virtually no pressure for the collection of faeces and urine to be separated from that of other wastes. Indeed, even uncontaminated animal slurry is more often seen as a problem than an asset because of the specialisation of farming: intensive meat producers do not have enough land to absorb it. Organic agriculture not only makes good use of animal waste but is also ideally set up to use human sewage. There are concerns about bacteriological contamination which can preclude the use of sewage on crops for human consumption, but with a rotational system this can be avoided simply by applying it during the years that a field is in grass.

Concern about the need to recycle energy and nutrients can go even further than a consideration of sewage: Hyams, in *Soil and Civilisation*, traces the path of a blade of grass, eaten by a deer, which is in turn eaten by a hunter and his family, and then:

> The blade of grass is now in the flesh of this human community. They die, and being sealed into a coffin, or perhaps burnt in a pyre, the best part of the substance of the blade of grass is lost, is shut off from return to the earth, or has gone up in smoke. The fraction of fertility which the grass borrowed from the soil to combine with solar energy in the building of its substance, has been permanently withdrawn from the total stock. (Hyams 1952: 10)

Organic producers try to maintain a cyclical agricultural system, rather than one characterised by the one-way travel of minerals from mines to fields, through crops and human digestion, and thence through some avenue of 'disposal'. However, parts of the system are beyond the control of individual producers: they typically cannot reclaim the bodily wastes of their customers. Because the sewage sludge which is available to farmers is often contaminated with heavy metals most organic producers have to compromise by replacing the nutrients lost in the sale of crops from other sources – plant and animal wastes from conventional farms, rock minerals, and seaweed. If organic methods are ever to be used on a wide scale, however, human wastes must be returned to the land.

Eco-catastrophe

However individuals choose to work the land, their efforts are vulnerable to the effects of the wider environment: rain and drought, plagues of insects, freak winds and late frosts. There are also human influences which are beyond the control of the individual – from wars and social disorder to, more insidiously, bureaucracy and fluctuating prices. Farmers, growers and peasants across the world have always had to accept a certain degree of uncertainty in such matters – although they do not always survive it.

In the past, environmental 'disasters' have been local aberrations from persisting long-term patterns. Now, however, we have to face the prospect that human activity is changing the underlying patterns themselves. The build-up of CO_2 in the atmosphere, depletion of the ozone layer, and the climatic effects of mass deforestation are only the most obvious examples. Just because we cannot predict the consequences of such alterations of the global environment does not mean that they will not happen. What we do know is that effects are likely to be widespread, and that there is huge momentum behind them. For instance, although it is just conceivable that all nations may at some time agree to halt

production of ozone-depleting gasses, those already released would continue to be active long thereafter. As yet, the most noticeable effect is an increase in human skin cancer, but what would the consequences be if it happened to interfere with the process of photosynthesis? Perhaps we can prevent or cure the melanomas, but what will the treatment do to our overall health? Or to the environment? CFCs were chosen as a propellant because they were thought to be inert; it was not simple carelessness but our reluctance to admit that we are not omniscient that first led to holes in the ozone layer. Birch has formulated a principle in response to the hallowed doctrine of technofix: "Our ability to change the face of the earth increases at a faster rate than our ability to foresee the consequences of that change." (Mollison 1990: 34).

There has always been someone ready to predict insurmountable disasters on a global scale, but the fact that past generations have been proved wrong does not undermine the possible validity of current concerns. After all, what would it be like if global weather patterns *were* beginning to break down? Snow in summer, years of drought and days of downpour, gales? If human activity is beginning to cause climatic changes then agriculture will almost certainly suffer. The main problem could be, as some predict, global warming caused by the increasing proportion of CO_2 in the atmosphere from the burning of fossil fuels, but it could turn out to be the poisoning of marine algae, or something as unforeseen as atmospheric turbulence caused by an excess of electromagnetic radiation.

We are undoubtedly an adaptable species but there are certain limits to the adaptability of agriculture, organic or not. One limit is time: if the world climate changed swiftly it would take years, even with the best organisation, before farmers could adapt to new crops and agricultural practices. In the meantime yields would be lowered – old crop varieties producing under conditions that were no longer right for them, and new ones being grown experimentally by people who had no experience of their requirements. Instead of changing in a steady and consistent fashion, the weather could become erratic – perhaps as a transition phase to a new stable pattern. The implications of this are even worse than those described above: if farmers could make no assumptions about how the weather was going to behave then every crop planted would be a gamble. Every failed crop would be a loss of investment of labour, seed and other inputs – and a lost opportunity to grow food on that land for a season.

In the West we have grown used to thinking of famine as a distant problem, but agriculture does depend on favourable weather conditions; if weather patterns change on a global scale we may not be the first to feel hungry, but we should not assume that we are

invulnerable. And despite notorious surpluses within the EC, world food stocks are entirely unequal to topping up a sudden global shortfall in production.

Organic agriculture is perhaps slightly more resistant to adverse weather than conventional: higher levels of humus in the soil hold moisture, and diversity of crops spreads the risk of failure, but ultimately there is probably not much in it. Organic agriculture could be undermined by the pandora of eco-catastophe as easily as conventional production. The difference is that there is a core of organic producers who are, now, deliberately trying to farm, grow, and live in ways which they feel make the possibility of such a catastrophe less likely.

Biotechnology

Proponents of biotechnology are ever anxious to assure people that the methods are just extensions of accepted techniques like plant breeding and artificial insemination, and they sometimes claim, in even more homely terms, that brewing and baking are examples of biotechnology. For those convinced of the benefits of organic husbandry the obvious response to this is "yes, and fertilizing includes spreading muck, but that doesn't mean that superphosphates are a good idea". Aside from processes of fermentation, the term 'biotechnology' covers techniques such as micro-propagation (cloning) of plants and the stimulation of multiple ovulation and embryo transplantation in animals – as well as the more controversial practices of genetic engineering. This last can involve removing or altering specific genes, or importing genes from one species to another – even from animals to plants and *vice versa*.

Informed public debate is made difficult by the fact the techniques of biotechnology are both complex and varied. For instance, the hormone BST was genetically engineered with the intention of injecting it into otherwise normal cows in order to boost their milk yield. This has proved controversial, but scientists are already working on 'transgenic' animals – for instance cows which are genetically engineered to produce high levels of the hormone within themselves. The implications for the welfare of the cow are similar, and consumers who are worried about the possible contamination of milk are not reassured by the prospect of the hormones simply coming from a different source – and yet from a technical point of view the enterprise is quite different. Genetic engineering also aims to create types of animals which will make more efficient use of feed, have specific carcass conformation, be resistant to certain diseases, and produce useful pharmaceutical

compounds. Such developments are, by and large, irrelevant to organic agriculture as they are explicitly geared to intensive livestock systems; like conventionally-bred 'efficient' stock the animals are likely to require precisely controlled conditions in order to achieve the intended results. There is also, within the organic movement, widespread objection on a moral level to the genetic manipulation of animals – although this may change if specific techniques become commonplace. The genetic engineering of plants, however, promises developments of greater relevance to organic systems.

Biological pest control is not as widely used by organic producers in Britain as, for instance, those in Holland or the USA, but it is generally accepted as a benign technique. Genetic engineering of the control species (usually bacteria or other micro-organisms rather than the well-known ladybirds) opens up myriad new possibilities for controlling insect pests, viral and fungal diseases, and even frost damage; many such developments are currently under trial and some are already in use commercially.

More promising still, in theory, is the prospect of crops genetically engineered to be resistant to certain diseases or able to withstand stresses such as drought and extreme temperature. The idea of grain crops provided with nitrogen-fixing root nodules is also tempting to organic farmers currently relying on legumes. Unfortunately the processes of nitrogen fixation, disease resistance and tolerance of environmental stress are all under multi-gene control, which makes them much harder to understand and manipulate: an industry 'time schedule' for the commercial introduction of plant technologies does not anticipate the introduction of nitrogen fixing cereals and grasses until the middle of the next century (North 1990: 56).

Research has meanwhile forged ahead in more immediately profitable areas such as engineering tomatoes which ripen without softening, and in flights of fancy like introducing jelly fish genes into plants to make them glow in the dark when under attack from pests or disease. One area of concentrated research has been the development of crops resistant to particular broad-spectrum herbicides – so that these chemicals can be used even after sowing the crop plant, rather than relying on less effective selective herbicides. This is especially significant for broad-leaved crops like sugar beet which are botanically closer to common weeds than grains are – making it harder to find chemicals which will kill weeds and not the crop. Companies which already produce herbicides are at the forefront of research in this area, and are already marketing seed-herbicide 'packages' for some crops.

The domination of research by industry is particularly worrying because 'green revolution' research – which developed high-yielding varieties by cross breeding – was spearheaded by government-sponsored research centres and yet, despite altruistic motivations, the effects of the green revolution have in fact proved immensely disruptive in countries like India which they were designed to benefit. Biotechnological research is primarily funded and directed by trans-national corporations who already deal in fertilizers and pesticides, and who stand to gain from selling their products regardless of how appropriate they are to the long-term ecology or economy of the areas in which they are used. Although discussions of biotechnology are sometimes prefaced by phrases such as "... the benefits modern biotechnology can bring if it is properly applied and controlled" (*New Farmer & Grower* 30: 30), there is little attention given to what might constitute 'proper' application, and how it is to be monitored, let alone controlled. The primary 'application' is all too obviously that of making money and the only evidence of 'control' is the issuing of patents. Patents have already been issued for genetically engineered organisms, and industry is pressing for individual genes to be patentable. Patents not only mean that the results of research will become the property of funding companies, but also that patent-holders will be entitled to collect royalties on plants or animals bred naturally from patented parent stock. Quite apart from the financial costs, if organic producers ever choose to use patented plants or animals it would be a step towards dependence on the specialist knowledge of the industry, in much the same way as some previously conventional farmers felt dependent on agrochemical companies – indeed, it is the very same companies which are promoting biotechnology.

The industry's attempt to claim that the techniques of biotechnology are not different in kind from those of past agricultural research is less than reassuring for organic producers who regard much of the past few decades of agricultural development as misguided. Moreover, most people would agree that there must be an important difference somewhere along the line between using yeast for making bread or beer and introducing human growth genes into pigs. Leaving such concerns aside, it is worth also considering the importance of differences in degree. An outstanding feature of biotechnology is its potential to introduce into the ecosystem a large number of novel varieties of animals and plants in a short space of time. Quite apart from *how* these organisms are produced, their impact *en masse* is much more likely to be problematic than the gradual integration of strains of crops and animals selected and cross-bred for generations. It is particularly ironic that there should be such intense interest in creating new varieties of plants and animals when the number of existing varieties, adapted over centuries to local conditions, is steadily declining.

Although some developments in biotechnology appear, on the face of it, reasonably safe, they should not be used to provide a screen for those which have an obvious potential for environmental disruption. Some genetically engineered organisms are likely to become pest species in the same way as non-native plants and animals have done in the past: rabbits in Australia, possums in New Zealand, Japanese knotweed in parts of Britain. Herbicide-resistant crops may transfer their resistance to weed species. Pests are likely to adapt and become resistant to genetically-engineered insecticidal micro-organisms in the same way as they have become resistant to chemical insecticides. Bacteria and viruses designed to kill pest species could end up harming beneficial ones. If this happens with a chemical pesticide one can simply stop using it, but micro-organisms once released cannot necessarily be recalled and may affect a far wider area than originally intended. The genetically-engineered bacteria used to prevent frost damage on strawberries interferes with the formation of ice-crystals – the obvious question should be asked: what would be the effect on snow formation if these bacteria got into the atmosphere?

The subject of biotechnology is sometimes introduced with an awesome disregard for the possibility of negative consequences; a dictionary for students of agriculture states without qualification that:

> Biotechnology offers great potential to increase farm production and food processing efficiency, to lower food costs, to enhance food quality and safety and to increase international competitiveness. (Dictionary of Agriculture 1990)

And a chapter on technology in *Agriculture in Britain: Changing Pressures and Policies* (ed. Britton) makes the assumption, for the purposes of the discussion, that "There will be no constraints either on the use of existing technology or on the uptake and use of the new technologies already identified or still to come" (North 1990: 49).

The major forces behind biotechnological R&D seem to be the profit-motive of trans-national corporations and, among researchers, the excitement of being able to manipulate things long thought to be beyond human control, together with the prospect of being able to establish personal reputations by being involved in the early years of a new field of endeavour. At this level the development of biotechnology seems to be pandering to the worst aspects of the modern male psyche while entirely disregarding the possibility that the work might have adverse consequences[1].

[1] When researching this section I found myself sickened when reading papers written by proponents of biotechnology – not because of *what* they wanted to achieve but because of the spirit

Biotechnology does not even have to try to blind people with science, as the science is genuinely complex. Some organic producers simply opt out of any technical debate and rely on their gut reaction (three of my interviewees described it as "too clever by half") or on a conviction that it is morally wrong – especially with regard to animals. Others are naïvely positive, believing that it will solve problems of world hunger and do the job of pesticides without side-effects. A few struggle mentally with the different aspects of biotechnology: concerned not to reject things just because they are new and often positively inclined to particular developments, but worrying about the speed of change and the lack of research into environmental effects.

There is a conspicuous lack of discussion within the organic movement about biotechnology: none of the organic organisations have formulated a policy on it; an attempt by the editor of the *New Farmer & Grower* to stimulate debate lasted only two issues; and a seminar planned by Elm Farm was cancelled due to insufficient interest[1]. The organic movement not only has to decide which, if any, applications of biotechnology it considers acceptable in organic systems, it also has to face up to the probability that organic producers are going to be affected by the use of biotechnological developments on neighbouring farms.

Policy and Bureaucracy

Organic producers tend to have an independent streak; farmers who convert are sometimes even partly motivated by the desire to get away from the entanglement of grants and subsidies that surrounds conventional agriculture, although they usually favour some legislation, for instance, to limit pollution. Organic producers are divided in their opinions about government support for organic agriculture: on the one hand, conventional agriculture is supported both directly and invisibly (farmers do not pay for cleaning up the pollution they cause) and if more farmers were tempted to be organic the environment would benefit; on the other hand, a flood of new organic producers might disrupt marketing and perhaps (if they are motivated by money more than ideals) make it more difficult to

in which they approached the work. The parallel which haunted me at the time was that of pornography: the language of biotechnology reveals a sadistic fascination with the apparatus of control and the entire enterprise is fuelled by the desire to dominate – in this case nature rather than women.

[1] Elm Farm subsequently (in August 1993) circulated a questionnaire asking for producers' views on biotechnology and organic agriculture, and specifically on whether or not the British organic movement should follow the line of IFOAM in prohibiting the use of genetically manipulated organisms in organic production systems.

police organic standards. There was a flurry of activity on the part of organic organisations about responding to the organic aid proposals of the Agri-Environment programme consultation document, but what is most noticeable among producers, particularly 'really organic' people, is the attitude of resignation: the form and level[1] of government support is perceived as being largely out of their hands and ultimately it will have little effect on what they are individually trying to achieve.

From a wider viewpoint, however, policy decisions have the potential to influence radically the development of organic agriculture in Britain. The most established objection to organic farming is that crop yields are lowered and that therefore, if all farms were organic, Britain couldn't feed itself. Of course, lowered crop yields, given EC surpluses, would be no bad thing, and in any case Britain is by no means 'feeding itself' at present but is involved in both importing and exporting food on a vast scale. If the right person in the right position of government authority – or even in Brussels – became convinced that organic farming could help both to reduce EC surpluses and reduce agrochemical pollution, they might initiate legislation favouring organic methods. Farmers have become accustomed to responding to ever-changing government policies, and it is likely that many conventional farmers would not be averse to farming organically if it was officially sanctioned and supported as thoroughly as, say, set-aside. However, the strength of the agrochemical lobby makes such a scenario unlikely and organic organisations have tended to concentrate their campaigning efforts on promoting the interests of existing organic producers – organising special quota arrangements for organic potatoes and pleading for free access to livestock quotas for instance.

Organic organisations, and particularly the Soil Association, have also been active in aiding the development of UKROFS standards, and in representing British organic interests to the EC – in particular with regard to conventionally raised transplant material and the rules about permitted ingredients in organic processed products. The EC regulation has proved to be the last straw for some organic producers who already felt constrained by Soil Association regulations or found it hard to pay the registration fees. If they have been farming and growing organically without being personally converted they

[1] The Agri-Environment programme is proposed to provide a basic rate of £70 per hectare (2.47 acres) for the first two years of conversion; lower rates apply to years 3,4 and 5, and for Less Favoured Areas and un-improved grassland. An additional £30 per hectare may be paid on the first 5 hectares of all land. Payments will only be made to producers in conversion. The Soil Association objects to existing producers being excluded from the programme and regards the level of funding as derisory; on both counts they argue that Britain is out of line with countries such as Belgium, Denmark, Germany and the Netherlands. (Soil Association 1993b)

may revert to conventional methods, but 'really organic' people who leave the symbol scheme are likely to go on living and working in similar ways without actually marketing their produce as organic[1]. The EC regulation has also contributed to the reduction in premiums for wheat (from 100% a few years ago to 25-30% now). Sales of flour have fallen because supermarket chains baulked at having all their in-store bakeries inspected for the production of organic bread. They have either dropped the line completely or re-named it 'environmentally friendly' bread – which puts them under no obligation to buy organic flour. Despite such negative consequences, the EC regulation will perhaps succeed in its intention to raise consumer confidence about the integrity of organic produce: the legislation has made it illegal to label a product as organic without being licensed to do so by one of the approved bodies – let alone issue certificates of 'organic certification' as one west country honey farm was previously doing for its products.

The effect of EC legislation on food hygiene is also being felt within the organic movement, not only by food processing companies, but also by farmers and growers who run farm shops or have small on-farm processing operations – making cheese or yogurt for instance. This legislation is perhaps even more irksome to people involved in marketing organic food than those dealing in equivalent conventional products because the assumptions behind it run directly counter to much of what 'really organic' people, at least, are trying to achieve: they value small-scale local initiatives on principle, as well as often depending on them in practice. The hygiene regulations were designed in the context of multiple outlet retailers and industrial food processors which rely on machinery and a workforce with no personal investment in the product; some of the requirements not only seem unnecessary in the context of smaller enterprises, but can be impossible for them to comply with. They also serve to reinforce the distance between consumers and the source of food: customers are being taught to expect increasingly sterile food rather than being encouraged to take an interest in how it has been handled prior to sale and how it should be treated afterwards. It is not clear, even, that the health of the nation is best served by reducing people's exposure to bacterial contamination of food – the net effect may be that people fail to build up a natural resistance and are thus more likely to succumb when they are exposed to minor sources[2]. Legislation about food hygiene, and indeed packaging makes the processing of organic products either impractical or financially unviable in some situations, and this has a knock-on effect on producers.

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[1] A few people expressed this intention when responding to the survey.

[2] One interviewee claimed membership of the fictitious "Save the Germ" society on these grounds.

In summary, the EC regulations on organic production, along with on those food hygiene, are already resulting in some organic symbol-holders leaving the schemes. On the other hand, support for organic producers through the Agri-Environment programmes may bring in new recruits. Although such changes in government policy undoubtedly affect the scale of production, they are unlikely to influence the motivations of those already involved in organic faming and growing.

Economic Paradigms

'Really organic' people are not alone in regarding the Common Agricultural Policy as a grotesque bungle: it is notorious for paying farmers not to farm and funding the long-term storage of surplus food. For people who are 'really organic' and are concerned with *how* things are done as well as ultimate goals[1], such consequences are enough to condemn the entire strategy. Moreover, independently minded organic producers – like many conventional farmers – would rather be paid a fair price by customers than be supported by government schemes.

Although organic producers are generally not enamoured of the managed economic strategies of the CAP, they tend also to be suspicious of unrestricted free trade, particularly on a global scale. The Bristol organisations have taken a forthright line on this and the latest round of the GATT talks were discussed in the *New Farmer & Grower* under headlines such as "GATT-astrophic" and "Heads You Win, Tails I Lose" (*New Farmer & Grower* 37: 17-8). However, independent 'quality' schemes such as organic standards are not under direct threat from proposals to liberalise trade because consumers still have the choice to buy cheaper produce. It is legitimate for governments to impose rules about the production and labelling of produce which claims to be organic, despite the fact that it is increasingly difficult for them to require that *all* produce sold in their countries carries information about, say, ingredients or country of origin. The objection to GATT is that it is the most powerful expression of an economic paradigm the details of which many organic producers have long criticised: much global trading uses fossil fuel needlessly; competition on grounds of price alone results in social, environmental and health costs being externalised; and corporate interests are favoured over the individual ones of farmers and consumers.

[1] See section on *Living Well* in chap 6.

Farmers around the world working by the rules of free trade will find it increasingly difficult to care for their land as they are exposed to competition from others who are more 'efficient' as a result of having cut down on production costs. While some industries do this primarily by mechanising and paying low wages, agriculture has the additional option of drawing on the 'capital' of fertility in the soil. In the short term this gives exploitative farmers an economic edge over those who choose to sustain or even build up fertility levels. From the stand-point of conventional economics this is perfectly acceptable but ecologically it is absurd.

Although it may be economically 'cheaper' to buy in NPK fertilisers to stimulate high yields and to dump human sewage rather than returning it to the land, this calculation assumes that we tolerate pollution (some of which will be visited on future generations rather than ourselves), and accept the erosion and degradation of soils. In the conventional economic paradigm such things are 'externalities', unless legislation gives them a price – via a 'polluter pays' system for instance. GATT does not prevent governments from operating internal systems to retrieve the cost of 'externalities' from industry, but it does prevent them from setting similar requirements for competing imports. Animal welfare legislation is also undermined by radical free trade proposals, as indeed are restrictions on permitted additives in foods.

Another thing which is epitomised by GATT, but which 'really organic' people (among many others) have long been critical of at a national level, is the prosperity of society being measured by the extent to which money moves around. GNP puts every expenditure on the same scale: money spent on school-books is added up with money spent on armaments; the cost of repairing a car (or indeed a person) after an accident, is counted alongside grants to the arts. Furthermore, GNP ignores non-monetary transactions such as unpaid childcare, growing food for home consumption, doing favours for neighbours, and barter – and indeed, black markets. As a result, the measurement of GNP undervalues rural subsistence economies in developing countries, as well as household economies the world over. Of course, economic indicators do not attempt to measure human happiness, but they are often interpreted as if they did – witness the phrase 'standard of living'. Nevertheless, it is ironic that, in Britain, 'really organic' producers who live simply are seen as less 'productive' than they would be if they earned more, bought more consumer luxuries (regardless of the environmental costs), drove their cars more, and shopped for processed food from supermarkets rather than eating what they produce themselves. People who choose to minimize their involvement in the monetary economy do contribute less to the wealth of the nation in terms of taxes; but their inevitable rejoinder to this is

that it is justifiable so long as government funds continue to be used in ways which are morally wrong or environmentally irresponsible.

One of my interviewees, who had left his job in the City of London for farming, summed up the incongruities of economic life by saying: "economics is such a poor indicator of sensible behaviour". Others made comments such as "there's more to efficiency than money", and one said that "economics is all about deciding what is valuable". The last definition is particularly illuminating: on this view it is inevitable that 'really organic' producers should be at variance with prevailing economics – because their personal value-systems are highly unconventional. Indeed, this is a fundamental problem about assessing the performance of organic methods quite apart from practical complexities: although, admittedly, profitability can make a difference to whether or not it is possible for people to farm or grow organically, there is a widespread conviction among producers that it is not the right yardstick for measuring the worth of an enterprise. Economists fail to comprehend that 'really organic' producers are not simply inefficient or lacking the ambition to make money – like perhaps, some elderly traditional farmers – but are rejecting the entire paradigm of conventional economics[1].

Organic producers are far from having a shared alternative economic theory, but in addition to their application of individual values to their life and work – as discussed in the previous chapter – there are some economic concepts being developed within the movement which may become more widely accepted in the future. However, there is surprisingly little contact between the organic movement and organisations such as the New Economics Foundation[2] which exist to promote research and discussion on such issues. This is unfortunate, as ideas which stem from a practical understanding of agriculture can have surprising potency: for instance, the Amish are reported as considering their own labour as part of the profit, rather than the cost, of farming – since they eat what they grow themselves, labour is in a sense an end product of the farm system (Logsdon 1986: 81).

In Britain the concept of Community Supported Agriculture (CSA) has been promoted by the Bristol organisations[3]. At one level CSA is simply a solution to the problems of marketing through middlemen, particularly supermarkets – consumers benefit by getting fresh and affordable organic produce while producers have a predictable market and do

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Murphy (1992) is a prime example.

The New Economics Foundation are based in London and run, among other things, "The Other Economic Summit" (TOES).

See Pullen 1992.

not have to comply with supermarket quality specifications. However, even the simplest forms of CSA, like delivering boxes and bags of vegetables at a standard price rather than making up individual orders, do to some extent challenge people's assumptions about how money can be used. With standard deliveries, the realities of vegetable production are given priority over the principle of consumer choice: despite the fact that it is the customer who is paying, it is the producer who is granted the leeway of 'choosing' the details of what is to be sold.

Some CSA systems ask for an annual subscription rather than weekly payments, and this can even be payable partly in work-hours rather than cash – with the explicit intention of bringing consumers closer to the source of their food. Such arrangements can be seen as a logical shift away from the idea of paying a price for food towards being part of a co-operative food production enterprise – with some people choosing to delegate their work-share and contribute financially instead. There are in fact few purely organic schemes as radical as this currently operative in Britain. The bio-dynamic movement, however, has the advantage of strong existing community networks; there are well-established bio-dynamic CSA systems in both the USA and in Germany, as well as several fledgling ones in Britain. Bio-dynamic aspirations for CSA are well expressed by the subtitle of an American book on the subject: "community supported farms/farm supported communities" (Groh & McFadden 1990). The authors deliberately disregard the imperatives of orthodox economics and instead of taking the existing system of land ownership and farming for profit as a starting point they map out what they see as the relevant ethical principles – such as that every individual should have free access to a plot of land – and then explore the ways in which these ideals can best be realised in the context of contemporary society (1990: 17-28).

Blueprint for Survival?

The most stimulating campaign slogan dreamed up by the Bristol Organisations was the banner of the 1991 Cirencester conference: "Organic Production: Niche Market or Blueprint for Survival?". On arrival at the venue delegates found the title on the conference packs omitted the question mark, and that the organisers' answer to the motion was provided by the freebie pens which were emblazoned "BOF/OGA: Blueprint for Survival"!

It is, indeed, the second part of the question which is the primary concern for by far the majority of organic farmers and growers. Although a few are motivated by the marketing

benefits of selling a niche product, my survey showed that eighty-eight percent of producers would continue to use organic methods even if they knew that they could make more money from conventional production[1].

There is, in Britain, a hard core of organic producers who regard their agricultural methods and ways of life as being, if not a blueprint, at least part of a working plan for the survival of humans and the earth. They often explicitly see the microcosm of an organic farm or garden as providing a model for responsible human interaction with nature, both practically and philosophically. It is not just the techniques of organic production which are deemed important, but the approach – in particular the need to 'develop a relationship' with nature rather than seeking to dominate the natural world or utilitarianly regarding it as a resource.

'Really organic' farmers and growers typically characterise this human relationship to nature as an ethical concern. One of the effects of this is that they internalise their motivations for living and farming organically: using conventional agricultural methods or being profligate in their lifestyle would be betraying their sense of themselves rather than just being ecologically irresponsible.

[1] See Appendix 1, Figure 6.

APPENDIX 1: SURVEY FINDINGS

This appendix summarises the findings of the survey (Figure 13) which I sent out in December 1991 to all 574 Soil Association symbol holders[1], of whom 309 (54%) responded. The intention of the survey was to gather information about the prevalence of particular attitudes among organic producers by presenting them with a series of statements (1-16) and asking them to tick a box under the headings, 'strongly agree', 'agree', 'disagree', 'strongly disagree', or 'don't know'. Additional questions, (17-21, 23 & 24), provided information about the type of holdings and the agricultural backgrounds of producers. The concluding open-ended question, 25, invited people to describe their reasons for farming or growing organically. Question 22 was also open-ended in format but it was included mainly to ensure that people did not opt out of answering the preceding question. Responses to question 25 (and indeed 22) were often eloquent and revealing but as they have been quoted extensively in Chapters 5 and 6 no further discussion is included here[2].

Statistical Data

In order to supplement the survey I collected some data about all Soil Association symbol holders, both from publicly available records and, by special arrangement, from Soil Association files. This data is presented in Figure 1 (columns A and B) and in Figures 2 and 3. Columns C and D of Figure 1 demonstrate that the survey respondents were representative of all symbol holders in terms of each of the characteristics by which it was possible to compare the two groups: the overall response rate of 54% ranged only from 48% to 63% in the various categories. The lowest response was from the region 'Midlands', and the highest was for the registered crop 'Herbs etc' (the catch-all category including

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[1] This figure excludes ten farms associated with agricultural colleges (on the grounds that I was interested in the motivation of individuals rather than of institutions), and the estates of the Prince of Wales and of Paul and Linda McCartney which are not listed in the Soil Association's main files for security reasons.

[2] See Chapter 3 for discussion of how coding these responses was helpful in developing the structure of the thesis.

seeds, transplants and flowers); in all other categories the response rate was between 50% and 60%.

Column E of Figure 1 lists the number of interviewees falling into each category. Although I did not intend my selection of interviewees to be representative in a strict sense, these figures show that it was not in fact grossly skewed in terms of region, organic acreage, direct sales or registered crops.

Appendix 1: Figure 1

Data on Soil Association Symbol Holders.

Columns A and B: breakdown by region (see Figure 2 for definitions), organic acreage, direct sales, and registered crops for all Soil Association symbol holders (data from Soil Association sources 1991).

Columns C and D: number and percentage of survey respondents in each category compared with field of all symbol holders.

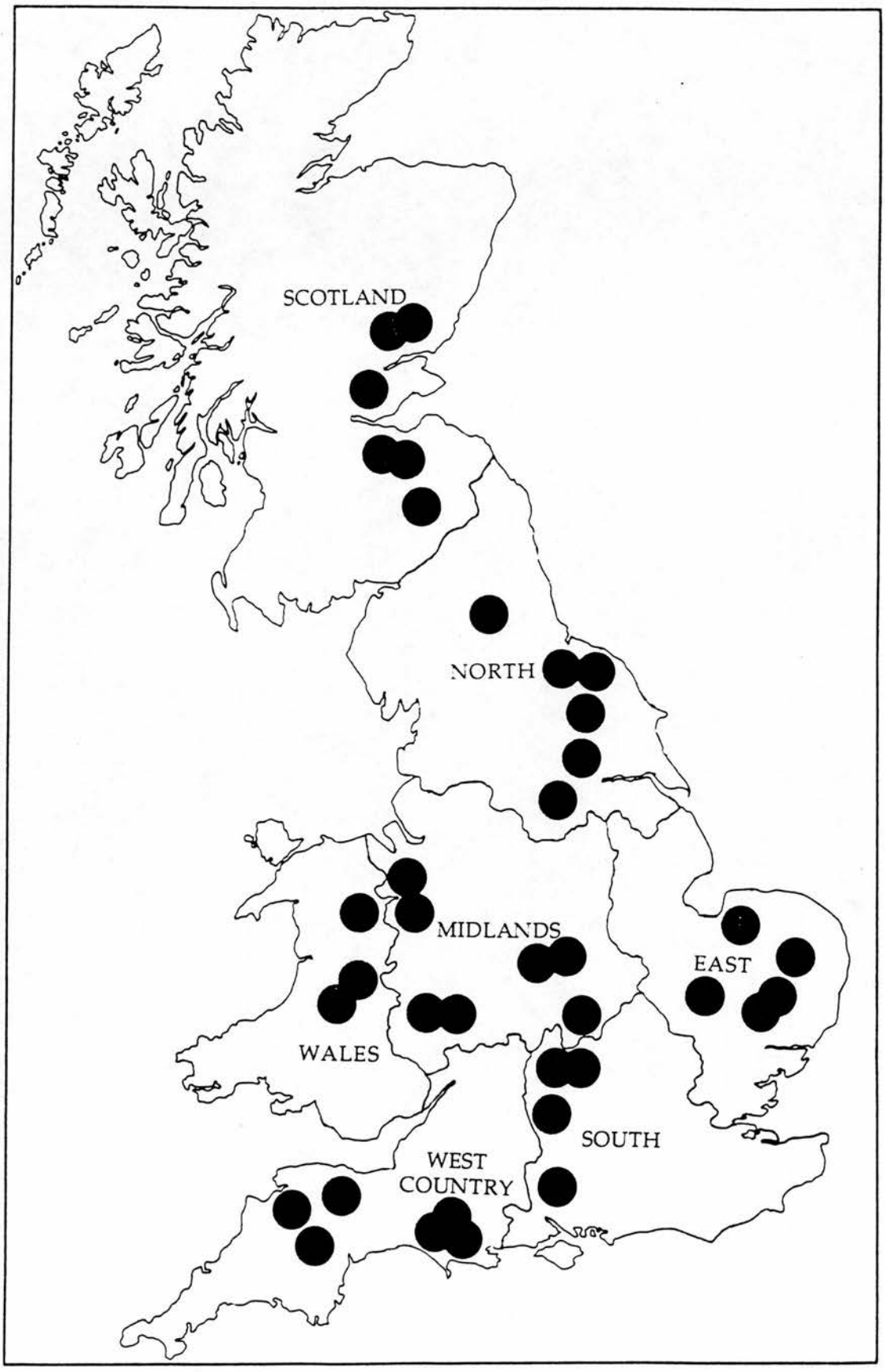
Column E: number of interviewees falling into each category.

	Column A: symbol holders in each category (total 574)	**Column B:** column A as % of total symbol holders	**Column C:** number of survey returns (total 309[1])	**Column D:** survey returns as % of column A (overall return rate 54%)	**Column E:** number of symbol holders interviewed (total 30)
REGION					
SCOTLAND	56	10%	33	59%	4
NORTH	47	8%	24	51%	5
WALES	87	15%	45	52%	2
MIDLANDS	87	15%	42	48%	6
EAST	63	11%	35	56%	5
W. COUNTRY	150	26%	82	55%	5
SOUTH	84	15%	48	57%	3
ORGANIC ACREAGE					
UNDER 10a	179	31%	107	60%	9
10-99a	267	47%	134	50%	10
OVER 99a	123	22%	63	51%	11
DIRECT SALES					
FARM SHOP	77	14%	46	60%	8
RETAIL CUST.	171	30%	101	60%	17
REGISTERED CROPS					
ARABLE	181	32%	91	50%	16
DAIRY	54	9%	30	56%	2
EGGS	10	2%	6	60%	2
FRUIT	190	33%	106	56%	11
GRAZING	287	50%	154	54%	11
HERBS etc.	67	12%	42	63%	2
MEAT	222	37%	114	51%	14
VEGETABLES	366	64%	198	54%	23

Not all columns total 309, either because not all respondents completed the question, or because ome came into more than one category. This is also the case with some of the other Figures.

Appendix 1: Figure 2

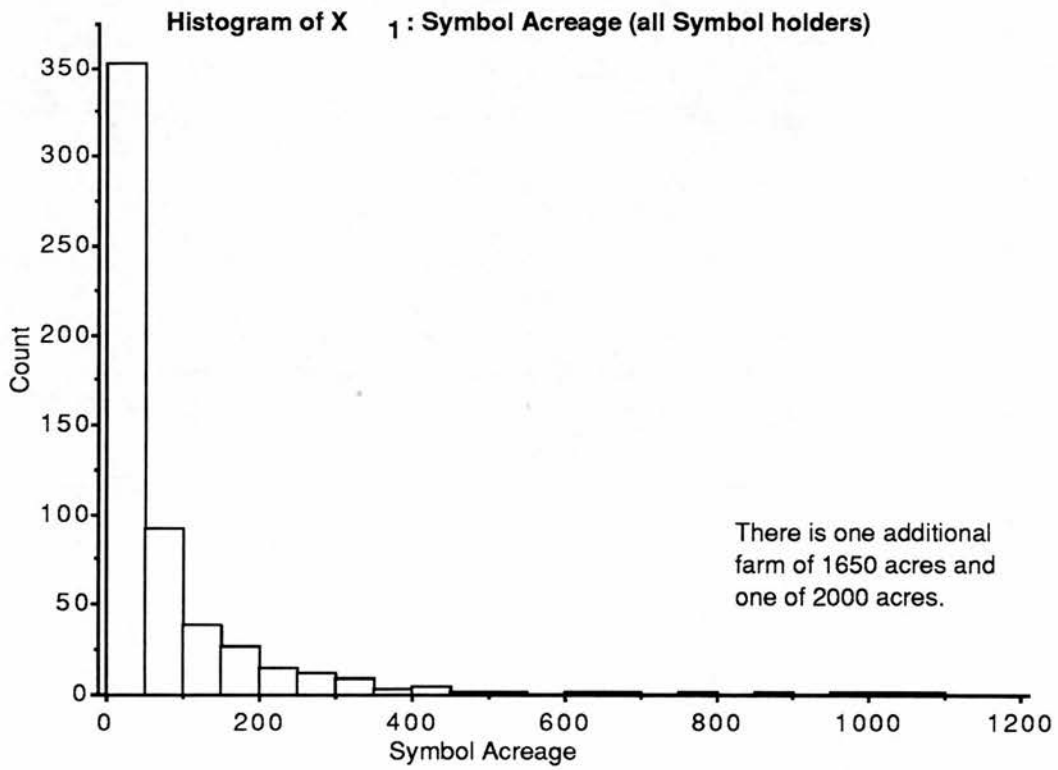
Interview Locations and Definition of Regions.



At the end of 1991 the Soil Association's 574 licensed organic producers were cultivating a total of 46,131 acres of land registered as organic. The mean organic acreage was therefore 81 acres, but this figure is distorted by a few very large farms: a quarter of the registered land is held by the twelve largest whereas 179 producers (31%) have less than 10 acres of organic land. The median organic acreage is 29 acres, and this is a more appropriate measurement in the context of a study concerned with the experience of producers rather than the volume of production – the median reflects the acreage held by the 'average' organic producer rather than averaging the acreage of all organic holdings. Figure 3 shows the distribution of the organic acreages held by Soil Association symbol holders.

Appendix 1: Figure 3

Acreages of land registered as organic by all Soil Association symbol holders (data from Soil Association sources).



Most Soil Association producers have only part of their land registered as organic: many farmers are part-way through converting their land field by field; a few see organic production as a sideline and intend to continue farming conventionally as well; and even on holdings where all production is organic the land around buildings, woodlands and wild

areas is sometimes not registered. The mean total acreage of producers who responded to the survey is 174a, and the median is 40a (question 23 in the survey). Assuming that those who responded to the survey are representative of the total number of registered symbol holders, there is nearly 100,000a of land controlled by producers who hold the Soil Association symbol for at least part of their acreage.

I had hoped to be able to distinguish producers who were fully converted from those maintaining some conventional acreage by comparing the figures for total acreage derived from the survey with the organic acreage figures available from Soil Association records. However, this was not possible, partly because the Soil Association records were compiled five months prior to the date of the survey and there were evident changes in the circumstances of many producers in the intervening period, and partly because of inconsistencies in the registration of non-productive land.

It is difficult to make comparisons between the size of conventional and organically registered holdings by comparing the above findings with agricultural statistics, as many of the enterprises registered as organic are too small to be categorised as agricultural holdings. However, the Nat West Bank's National Farm Survey (1992) (which had a response rate of 30%) does corroborate the common assumption that organic production is associated with small farms. 85,000 farmers were asked if they had any "acreage used to grow organic crops (as defined by the Soil Association)" and 87% of those who responded positively were on farms of less than 124 acres; overall, only 28% of farmers had less than 124 acres[1].

Figure 1 lists 14% of organic producers as running farm shops and 30% selling to retail customers. However, further analysis of the data shows that 11% of producers both have a farm shop and sell to retail customers; overall just under a third of organic producers are selling directly to the public in one or both of these ways.

The Soil Association groups the products it licences into eight main categories (see Figure 1 for breakdown of numbers in each), but 'Eggs' I shall exclude henceforth because there are

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[1] It should be pointed out, however, that in the Nat West survey just under 2% of respondents said they had some organic acreage which implies, by their own figures, that about 2670 farmers did so nationally in May 1991 when the survey was conducted. This is far in excess of the number officially registered at that time (the Soil Association had fewer than 600 symbol holders at the end of the year, many of which were too small to count as farms by the Nat West's criteria, and other registering bodies will not have even brought the total above 1,000). Nevertheless, it is significant that it was the smaller farmers who claimed to be involved in organic production, even if they were not in fact registered.

only ten producers nationally; 'Grazing' is excluded because it covers products such as hay and silage which are not sold to the general public and because the Soil Association's use of this category is not consistent – producers who grow fodder for their own organic stock are not always explicitly registered for these crops; while 'Herbs etc' is excluded because this category licenses very disparate products. Most producers are licensed for more than one sort of crop, and Figure 4 shows, for each crop category, the producers who are registered for this crop alone (as a percentage of the total number registered for the crop category), and the percentage (again, of the total for the crop category) who are also registered for the other crops.

Appendix 1: Figure 4

Data on Soil Association symbol holders registered for five main categories of production.

The number of symbol holders in each category is shown, followed by the percentage of these which are also registered under each of the other categories.

	Number of symbol holders (total 574)	Ar.	Da.	Fr.	Mt.	Veg.	Percentage registered for the one category only
ARABLE	181		12%	19%	53%	62%	15%
DAIRY	54	41%		17%	78%	39%	15%
FRUIT	190	18%	5%		22%	86%	9%
MEAT	222	43%	19%	18%		44%	31%
VEG.	366	31%	6%	45%	27%		27%

Reading across Figure 4 shows, for example, that while 62% of producers registered for arable crops are also registered for vegetables, only 31% of the total number registered for vegetables are also registered for arable. The explanation for this is that there are more than twice as many vegetable producers as arable, and while vegetable growing is compatible with arable production (either field crops or a small permanent garden area), there are many vegetable growers without the land, equipment, or inclination to grow arable crops. Fruit growing is rarely a sole enterprise (9%), and it is most often combined with vegetables (86%). On the other hand while 45% of vegetable growers also grow fruit, 27% of of them are not registered for any other crops.

Nearly a third of meat producers are registered only for meat, which is accounted for largely by the many hill farms using permanent pasture to raise organic sheep and cattle. However, only 53% of arable farmers are producing organic meat, despite the fact that arable production is usually part of a rotation incorporating grass leys grazed by animals. Part of the explanation for this is that arable farmers who are converting their land in sections need to make use of the non-organic grazing provided by leys during the two-year conversion period, and organic grazing does not become available until the second rotation. Additionally, the interviews and participant observation suggest that the insecurity of the organic meat market can lead arable producers to raise stock as conventional – although grazing organic land – as they feel that it is not worthwhile to abide by organic standards on welfare and medication.

Appendix 1: Figure 5

The number of symbol holders in each area of the country (see Figure 2 for definitions), and percentage of those in each region who are registered for each of the five main crop types.

	No.	Arable	Dairy	Fruit	Meat	Veg.
Scotland	56	28 (50%)	2 (4%)	13 (23%)	28 (50%)	35 (63%)
North	47	15 (32%)	2 (4%)	11 (23%)	12 (26%)	33 (70%)
Wales	87	15 (17%)	10 (11%)	22 (25%)	52 (60%)	48 (55%)
Midlands	87	34 (39%)	6 (7%)	27 (31%)	36 (41%)	54 (62%)
East	63	20 (32%)	4 (6%)	24 (38%)	11 (17%)	51 (81%)
West Country	150	45 (30%)	22 (15%)	51 (34%)	62 (41%)	88 (59%)
South	84	24 (29%)	8 (10%)	42 (50%)	21 (25%)	57 (68%)
Total	**574**	**181 (32%)**	**54 (9%)**	**190 (33%)**	**222 (39%)**	**366 (64%)**

Figure 5 gives a profile of the sort of organic production taking place in the different regions of the country, e.g. only 41% of West Country organic producers are registered for meat, against 60% of those in Wales. This should not be taken as a guide to the *volume* of production emanating from each region, which is additionally dependent on the actual number of producers (for instance, despite the higher proportion of registered meat

producers in Wales the total number in the West Country is greater) and on the sizes of their operations. Points of particular interest are the specialization away from arable and towards meat in Wales, the high proportion of arable farmers in Scotland, the many vegetable growers and few meat producers in the East, and the large number of fruit growers in the South.

Appendix 1: Figure 6

Responses to questions 17-21 & 24 of survey.

17 Have you ever farmed or grown commercially using conventional methods?	yes	178	58%
	no	129	42%
18 Would you continue to use organic methods if you knew that you could make more money from conventional production?	yes	263	88%
	no	36	12%
19 Were your parents commercial farmers or growers?	yes	111	36%
	no	195	64%
20 If your parents were involved in food production (even if only for home consumption) are their methods best described as:	traditional	139	67%
	organic	28	13%
	modern-conventional	42	20%
21 Please circle the description which fits you best:	farmer	61	20%
	livestock farmer	53	17%
	farmer and grower	52	17%
	grower	88	28%
	smallholder	55	18%
24 What was the approximate sale value of your *organic* production for the last year? This should include non-food items such as straw, seed, and store cattle or lambs, but not anything bought in for re-sale through a farm shop etc.	Less than £10,000	202	69%
	£10,000 - £40,000	69	23%
	£40,000 - £100,000	16	5%
	Over £100,000	7	2%

The above table shows the responses to survey questions 17-21 and 24 (responses to the attitude statements are set out in Figure 11). In the following discussion this survey data is considered jointly with the information about all Soil Association symbol holders. I have used contingency table analysis to show how these different 'factual' aspects are interrelated and, in the following section, to establish the relationships between responses to attitude statements and the factual data. I have chosen, for simplicity, to cite the probability as a measure of the strength of the connection in each case rather than the Chi

square[1]. I have only regarded as significant relationships with a probability of less than 0.05, and most of the examples discussed have a probability of less than 0.01; probabilities stated as p .0001 include all lower figures. Chi square tests were carried out on the actual data but percentages are given in the Figures and in the text to make the relationships clearer.

For the purposes of analysis, acreages (both organic and total) were put into three bands, 'under 10a', '10-99a' and 'over 100a'. For definitions of the regions see Figure 2. The turnover figures were lower than I had expected even after doing my qualitative work and for the purposes of analysis I merged the upper three groups into an 'over £10,000' category (which accounted for only 31% of those who declared their turnover) and compared it with the original 'less than £10,000' category.

Appendix 1: Figure 7

Organic acreage/Organic turnover in the previous year.

p .0001	under £10,000	over £10,000	OVERALL
under 10a	**90**	**15**	**105** (36%)
10-99a	**88**	**40**	**128** (44%)
over 100a	**20**	**37**	**57** (20%)
OVERALL	**198** (69%)	**92** (31%)	**290**

Figure 7 shows that producers with smaller acreages of organically registered land tend to be in the lower turnover bracket, although fifteen of them achieved turnovers of more than £10,000. More strikingly, twenty of those farming over 100a organically achieved less than £10,000 worth of organic output. However, this is not a necessarily a reflection on the income to be expected from an established organic farm: it can be partly attributed to recently converted land not cropping well until it has regained full fertility, and partly to the fact that some products of organic land, notably stock, are not always marketed as organic. Additionally, the cash flow of farms in conversion is complex and, for instance,

[1] It seemed unnecessarily complicated to cite figures for Chi square as they are not immediately comparable in cases where the Degrees of Freedom differ.

produce from land in its first year of organic production may not yet have been sold at the time of the survey.

Producers who answered 'yes' to question 17: *Have you ever farmed or grown commercially using conventional methods?* are more likely to be in the 'over £10,000' bracket than those who answered 'no' (38% against 22%; p .007). Similarly, those who responded positively to question 19: *Were your parents commercial farmers or growers?* also tended to have a higher turnover: 44% of those who said *'yes'*, and only 24% who said *'no'*, were in the upper bracket (p .0004). There is also a very strong relationship between the two questions; people tended to answer 'yes' to both questions or 'no' to both, rather than 'yes' to one and 'no' to the other (p .0001). There was a tendency for those who answered 'yes' to either of these questions to be among the relatively small number of people who answered 'no' to question 18: *Would you continue to use organic methods if you knew that you could make more money from conventional production?* (p .0002 for Q 17 (see Figure 8 below), and p .008 for Q 19).

Appendix 1: Figure 8

Q 17: Conventional experience/Q 18 "Would you continue to use organic methods if you knew that you could make more money from conventional production?"

p .0002	"Yes" to Q 18	"No" to Q 18	OVERALL
Conventional experience	**140**	**31**	**171** (57%)
No conventional experience	**122**	**5**	**127** (43%)
OVERALL	**262** (88%)	**36** (12%)	**298**

Questions 17 and 19 also both correlated strongly with total acreage (probability less than .0001 in both cases); Figure 9 shows the relationship between total acreages and people with experience of conventional methods.

Appendix 1: Figure 9

Total acreage/Q 17 "Have you ever farmed or grown commercially using conventional methods?"

p .0001	'Yes' to Q 17	'No' to Q 17	OVERALL
under 10a	**18**	**59**	**77** (25%)
10-99a	**73**	**56**	**129** (42%)
over 100a	**86**	**13**	**99** (32%)
OVERALL	**177** (58%)	**128** (42%)	**305**

Vegetable producers emerged as a distinctive category which differed from the norm in several ways. Unsurprisingly, they tend to have smaller total acreages as Figure 10 sets out.

Appendix 1: Figure 10

Total Acreage/Registration for vegetables.

p .0001	Vegetables	No Vegetables	OVERALL
under 10a	**71**	**6**	**77** (25%)
10-99a	**85**	**45**	**130** (43%)
over 100a	**39**	**60**	**99** (32%)
OVERALL	**195** (64%)	**111** (36%)	**306**

Vegetable producers also tend to have no experience of conventional methods (Q 17; p .0001) and their parents are more likely to have had no involvement with commercial farming or growing (Q 19; p .0123). Vegetable producers are also more likely to be selling directly to the public through farm shops (p .0007) or to retail customers (p .0001).

Arable producers, on the other hand, are more likely to have conventional experience (Q 17; p .0001), parents who were commercial farmers or growers (Q 19; p .0001), high total acreages (p .0001) and high sales (p .0001).

Producer Attitudes

I was conscious when designing the survey that if people became frustrated by not being able to fit their own opinions into multiple choice answers they would be less likely to bother returning the form at all. I decided to use single 'attitude' statements in the survey – rather than multiple choice questions or pairs of opposing statements – in the hope that fewer people would refuse to give an opinion because of disliking the framework of the choice presented. The high survey return rate may be partly attributable to the success of this strategy. In addition, relatively few people scribbled their own formulations of the statements on the survey forms rather than tick the boxes – only about 20% commented on any of the statements, and this usually to change the emphasis rather than to re-phrase the statement. Most of the statements were amended by fewer than 3% of respondents, and I have mentioned in the following discussion the three statements which elicited greatest comment.

Figure 11 gives the responses to the 'attitude' statements of the survey, both in terms of numbers and percentages of the total response. The 'don't know' column includes not only those who ticked 'don't know' for a particular statement, but also those who failed to respond to it at all. The final column is a Likert Scale; each response of 'strongly agree' was rated 2, 'agree' 1, 'don't know' 0, 'disagree' -1, and 'strongly disagree' -2; the resulting figure was then divided by the total response and gives an indication of the strength of common opinion. The Likert Scale is only used in this table; for further analysis (relationships between responses to attitude statements and relationships between individual statements and the factual data) I collapsed 'strongly agree' with 'agree' and collapsed 'disagree' with 'strongly disagree'; 'don't know' was excluded altogether.

Appendix 1: Figure 11

Responses to attitude statements of survey (1-16).

	st.a.	agree	disag.	st.d.	don't k.	Likert
1 Developing the existing 'up-market image of organic food is a good way forward for marketing.	30 **10%**	77 **25%**	115 **37%**	50 **16%**	37 **12%**	-.25
2 People who eat organic food should become more involved in how it is grown (e.g. buying food direct from the producer; community supported agriculture schemes).	116 **38%**	133 **43%**	36 **12%**	2 **1%**	22 **7%**	1.05
3 Organic food is significantly healthier to eat than conventionally produced food.	159 **51%**	111 **36%**	17 **6%**	4 **1%**	18 **6%**	1.31
4 Consumers should not expect organic vegetables to be blemish-free and regular.	134 **43%**	149 **48%**	16 **5%**	5 **2%**	5 **2%**	1.27
5 There should be ongoing financial support for organic producers, paid on an acreage basis.	110 **36%**	93 **30%**	56 **18%**	25 **8%**	25 **8%**	.67
6 There should be conversion grants for new organic producers.	105 **34%**	117 **38%**	45 **15%**	20 **6%**	22 **7%**	.78
7 Organic standards for arable and vegetable crops should regulate only what is necessary to give consumers a guarantee that the food is produced without using agrochemicals.	35 **11%**	106 **34%**	81 **26%**	64 **21%**	23 **7%**	-.11
8 Organic standards should prohibit the use of genetically engineered plant crops (varieties produced by gene transfer, rather than through traditional methods of selective breeding)	72 **23%**	77 **25%**	54 **17%**	21 **7%**	85 **28%**	.40
9 Organic agriculture should aim to reduce dependence on fossil fuels.	127 **41%**	141 **46%**	17 **6%**	3 **1%**	21 **7%**	1.20
10 Organic agriculture should aim to increase the number of people working on the land.	111 **36%**	130 **42%**	33 **11%**	10 **3%**	25 **8%**	.74
11 Organic agriculture should aim to encourage the local consumption of locally produced food.	194 **63%**	101 **33%**	9 **3%**	1 **0.3%**	4 **1%**	1.55
12 Producing food organically is important because it contributes towards a fundamental change of direction not just in agriculture, but in the development of Western society.	136 **44%**	124 **40%**	12 **4%**	7 **2%**	30 **10%**	1.20
13 Organic agricultural methods offer the best long-term hope of feeding the world.	109 **35%**	101 **33%**	43 **14%**	14 **5%**	42 **14%**	.80
14 Organic agriculture is better for the local environment than conventional agriculture.	197 **64%**	97 **31%**	4 **1%**	3 **1%**	8 **3%**	1.55
15 Organic agriculture is better for the global environment than conventional agriculture.	196 **63%**	91 **29%**	5 **2%**	4 **1%**	13 **4%**	1.52
16 Organic agriculture allows the farmer or grower a greater degree of involvement and personal satisfaction than conventional agriculture.	115 **37%**	106 **34%**	36 **12%**	8 **3%**	44 **14%**	.92

The first statement that producers were asked to consider was: *Developing the existing 'up-market' image of organic food is a good way forward for marketing.* I had initially wanted to ask about the role of supermarkets in selling organic produce, but although this is undoubtedly an area where feelings run high, there are too many different issues at stake to be contained in one statement. Instead, I picked out what I thought was one of the most interesting aspects of the debate: promoting organic foods as a speciality, up-market product – as exemplified by the supermarkets' approach to marketing. Statement 1 was designed to find out how many producers agreed with this as a policy, regardless of other concerns. Only thirty-five percent of the respondents agreed with the statement and by comparison with responses to the other statements they were unwilling to commit themselves: most of those assenting ticked 'agree' rather then 'strongly agree'. About 6% of respondents annotated the statement in some way: mainly questioning whether there is an up-market image, or discussing who was benefiting from it. The statement was rejected by more people than any of the others, and vegetable producers were even more likely to disagree than the general population (p .0165). It is tempting to attribute this to the particular experience of vegetable growers, who find it difficult to achieve the cosmetic standards set by conventional producers, and who thus may not feel confident of being able to sustain an up-market image. However, responses to later statements show that the opinions of vegetable growers often diverge from the norm even where there is no such pragmatic explanation apparent and, conversely, their opinions about statement 4 – about the superficial appearance of vegetables – are unremarkable.

Statement 2 proposes that people who eat organic food should become more involved in how it is grown, and there was fairly solid agreement to this statement, with no particular groups more or less likely to assent. In retrospect, it might have produced a more divided result if I had asked whether producers should initiate such developments – it was perhaps too easy for respondents to agree when it was phrased as being the responsibility of the consumer. No particular sub-group was statistically more or less likely to agree with the statement, although this is partly attributable to the difficulty of establishing a relationship when the actual numbers of people disagreing are so small. (This is a more acute difficulty with some of the later statements, particularly 11, 14 and 15.)

Statement 3 was: *Organic food is significantly healthier to eat than conventionally produced food,* and given the healthy image associated with organic food, it is noteworthy that as many as 7% of producers disagreed with this. Vegetable producers were less likely than most to disagree with statement 3 (p .0016), while people with experience of conventional production were much more likely to disagree (p .0002). This

fits in with the interview material, which suggests that many small-scale vegetable producers start growing organically because of a prior interest in healthy eating, whereas conventional producers often change to organic methods of cultivating the land without altering their own eating habits.

Statement 4 perhaps suffered by being phrased negatively, but as it stands there is fairly solid agreement that *Consumers should not expect organic vegetables to be blemish-free and regular.* It is a topic about which there has been much discussion within the movement, and it is usually supermarkets rather than their customers who have been characterised as making excessive demands – particularly in requiring that vegetables should fit standard packaging trays. Producers with some conventional experience were marginally more likely to dissent from the statement (p .0289).

The next two statements, 5 and 6, outlined what were at the time the two most probable scenarios for government support for organic production: an acreage payment and conversion grants to ease the financial strain of low output during the first few years. Statement 5: *There should be ongoing financial support for organic producers, paid on an acreage basis* won rather less favour than statement 6: *There should be conversion grants for new organic producers.* There is no significant correspondence between total or organic acreage and response to this statement but acreage payments were particularly favoured by arable farmers (p .0052), and dairy farmers (p .0173) – both groups which have the reputation of being business-minded and used to working with the agricultural support system. About 6% of respondents amended statement 5 in some way; speculating about the consequences or bemoaning the 'subsidy culture'; statement 6, on the other hand, did not elicit many unsolicited comments.

For some producers statement 6 raises fears of unfair competition from people who have not had to take the risk of funding their own conversion. On the other hand, people who are committed to having more land cultivated organically are aware that conversion grants would hasten this process. Vegetable producers again stand out as a group; they are much more likely than most to be in favour of conversion grants (p .0006), as are those with lower total acreages (p .0032). People with experience of conventional production were more likely to disagree with statement 6 (p .0327), as were those who said that they would not continue to use organic methods if they knew that they could make more money from conventional production (p .0088). I surmise that there is a greater proportion of people in these groups who want organic production to remain a form of diversification, and thus able to command premium prices, rather than be a force for change in British agriculture.

Statement 7 suffered from awkward phrasing and about 5% of respondents re-formulated or annotated it. When I looked through the survey responses it was clear that a few people had taken the question the wrong way, as their response conflicted with the line they were taking on other issues. However, it is a fundamental concern: whether the Soil Association should be simply administering a food quality scheme, or whether they are right to take on wider concerns which the public do not associate with organic production. The statement, *Organic standards for arable and vegetable crops should regulate only what is necessary to give consumers a guarantee that the food is produced without using agrochemicals,* pulled groups of people into different camps more than any of the others. Vegetable producers once again tended towards idealism, in this case by disagreing (p .0082), along with those who had retail customers (p .0023). There is a tendency to agree with the statement among people whose parents were commercial farmers or growers (p .0042), and, predictably, from those who would abandon organic production if they could make more money conventionally (p .0001).

Genetic engineering is an area where the Bristol organisations have yet to decide on a clear policy, and the very high proportion of people who responded 'don't know' to statement 8 is perhaps in part a reflection of the lack of a clear lead from the centre. It is a highly emotive subject (although I avoided the issue of animal exploitation by restricting the statement to arable and vegetable crops), and it is also very technical – in interviews many people were painfully conscious of their ignorance of the technical details. 28% percent of respondents were not prepared to agree or disagree to the statement *Organic standards should prohibit the use of genetically engineered plant crops (varieties produced by gene transfer, rather than through traditional methods of selective breeding).* This 'don't know' rate is far higher than for any of the other statements (the median 'don't know' rate for the 16 attitude statements was 7%). People who would adopt conventional methods if they could make more money by so doing were more likely to disagree with the statement (p .0039). People whose parents had produced food organically were most likely to agree, followed by those whose parents used traditional methods, while those whose parents were conventional producers were least likely to do so (p .005). This statement was, intriguingly, the only one to show a significant relationship with geographical region (p .0335); the most dramatic divergence being in Wales, where 90% of producers agreed with the statement, compared with 67% overall.

Statement 9, *Organic agriculture should aim to reduce dependence on fossil fuels,* was perhaps too easy to agree with as a principle without facing up to the practical implications – indeed, too few respondents disagreed to show up correspondences with

other factors. Five of the respondents returned to the theme of fossil fuel use in the open-ended question (question 25), and evidently had strong feelings about it.

Statement 10 was: *Organic agriculture should aim to increase the number of people working on the land.* Most people assented to this, although more agreed than strongly agreed. Vegetable producers as a group were more likely to agree with the statement (p .0017), perhaps simply because of the need for hand-work with vegetables. Those with lower total acreages were also more likely to agree (p .0053).

Statement 11, *Organic agriculture should aim to encourage the local consumption of locally produced food,* gained so much support that it was not possible to distinguish statistical differences in responses from the various sub-groups. The interview data shows that while this is sometimes simply a protectionist concern it is frequently couched in terms of maintaining local communities through local food supply networks, or else arises from a concern to minimize socially or ecologically exploitative trade with the Third World.

In the interviews my question: *Do you think that Western society is going to have to change in any fundamental ways in the future?* elicited a very mixed response, and many people expressed a sense of powerlessness, claiming that their opinions were irrelevant in the face of the problems they perceived. I was surprised, therefore, at the solid support for statement 12 in the survey (*Producing food organically is important because it contributes towards a fundamental change of direction not just in agriculture, but in the development of Western society*). I am tempted to attribute this agreement to people's desire to feel that what they are doing is in fact important, and the relative safety with which they can express this by ticking a box as compared to the interview situation. In interviews they knew that I would ask for explanations of any position they took, so only those who were sure of their ground responded positively – but then often at length and with great strength of feeling. The only significant relationship with this statement was that vegetable producers were somewhat more inclined to agree (p .0379).

Statement 13: *Organic agricultural methods offer the best long-term hope of feeding the world,* elicited a fair degree of disagreement (19%), a high 'don't know' rate (14%), and various alternative suggestions such as permaculture, land reform, bio-dynamic methods, and "anything that will reduce soil erosion". Some of the comments indicated that people thought that political and social solutions were essential, and that agricultural practices of any sort were therefore not the ' best hope'; but I think it is likely that most people who disagreed were simply concerned that lower yields per acre meant that organic agriculture would be unable to produce a sufficient volume of food world-wide. Vegetable producers

were inclined to agree with the statement (p .0003), as were those with low total acreages (p .0187). There was a tendency to disagree among those whose parents were commercial producers (p .0008), who had experience of conventional production (p .007), or who would abandon organic methods if they could make more money otherwise (p .0063).

I put statements 14 and 15 into the survey as a pair because of interview material which indicated that many producers were focussing on local rather than global environmental issues. I had expected strong support for statement 14 (*Organic agriculture is better for the local environment than conventional agriculture*) and a more muted response to 15 (*Organic agriculture is better for the global environment than conventional agriculture*). In the event, very few people disagreed with either of them, probably because the two statements were phrased so similarly and abstractly. I had chosen not to mention specific environmental issues to avoid responses being clouded by differences of opinion on technical matters. Qualitative data about these issues was more revealing and is discussed in Chapter 5.

Statement 16 was: *Organic agriculture allows the farmer or grower a greater degree of involvement and personal satisfaction than conventional agriculture.* I suspect that many people found this difficult to answer if they had no personal experience of conventional production; there was general agreement, but with a high 'don't know' rate (14%). People who would not continue with organic methods if they could make more money conventionally were marginally more likely to disagree (p .0403).

The factors which corresponded with divisions of opinion on several attitude statements were, in order of importance: i) registration for vegetable production, ii) answers to question 18: *Would you continue to use organic methods if you knew that you could make more money from conventional production?* iii) answers to question 17: *Have you ever farmed or grown commercially using conventional methods?* iv) acreages (particularly total acreage of the holding rather than the organic acreage). It is striking that the financial turnover bracket does not correlate significantly with any of the attitude statements (1-16). Superficially this is surprising, but because organic production is in a state of rapid growth many of the producers who intend to have high turnovers in the future have, as yet, only partly converted; their present turnovers are thus comparable to those of people who have chosen to operate on a small scale.

Figure 10 shows the strong relationship between vegetable production and low total acreage, and these two sub-groups are always on the same side of an issue in the instances where their responses to an attitude statement differs from the norm. However, vegetable

production is a much more divisive factor than acreage; it appears more often as a significant factor and, for the statements where there are significant relationships, its probability figure is the lowest. The attitudes of vegetable producers tend to be more idealistic, less protectionist (as said previously, more of them are in favour of conversion grants), and more likely to be optimistic about the potential for organic agriculture to feed the world. It is intriguing that vegetable producers emerged as a group with such cohesive opinions, given that the category includes everything from half an acre at the back of a cottage to farmers growing field vegetables in rotation with other crops.

In all the cases where their differences of opinion on an attitude statement were significant, producers with conventional experience tended towards the opposite side of the argument from the vegetable growers. They were joined in this by those who would abandon organic methods if it was more profitable to use conventional techniques – as previously noted, there is a strong relationship between these two sub-groups (see Figure 8). They also tend to be the producers with higher total acreages (see Figure 9).

In general, I was surprised at the level of agreement with those attitude statements representing idealistic viewpoints which were commonly disowned during interviews. During interviews, the details of practical difficulties and uncertainties sometimes served to obscure people's underlying ideals, while the format of the survey was clearly asking about principles rather than detailed practice and this perhaps made it easier for producers to respond positively to statements about the fundamental aims of organic production.

Appendix 1: Figure 12
Accompanying letter for survey.

DEPARTMENT *of* SOCIOLOGY
The University of Edinburgh
18 Buccleuch Place
Edinburgh EH8 9LN
Telephone 031 650 1000
or direct dial 031 650 3985

16 December 1991

Dear producer,

This survey aims to provide a realistic picture of how widespread certain attitudes and opinions are among organic producers. Many, sometimes contradictory, viewpoints are often attributed to the organic movement in general, and this research should discover whether some of these are in fact mainly held by particular groups of people – e.g. newcomers to agriculture, livestock farmers, producers with only a few acres, or those with large farms.

The results of the survey will enable the Soil Association and BOF/OGA to make decisions and plan campaigns with more information about which issues producers see as important or irrelevant. The main findings will also be published in the summer issue of Symbol News.

This survey is part of a three-year research project. I am based at Edinburgh University, and over the past year I have conducted interviews with forty organic farmers and growers across Britain, in addition to spending short periods working on about a dozen farms and market gardens. I hope to put together a representative and up-to-date account of the organic movement, and of producers' attitudes to the various ways in which it might develop in the future – particularly in the areas of marketing and the scope of organic standards. The questions asked here have developed out of the interviews and the results will be interpreted in the context of that wider experience.

I hope you are prepared to help with this. It should not take long to fill in, and the purpose is to provide reliable information which may interest or benefit you. The more people respond, the more accurate the findings will be. If you feel restricted by the form of the questions you are welcome to add additional comments. I would be grateful if you could return the survey to me, in the SAE provided, by the 10th of January.

Yours sincerely,

Anna Ashmole

Anna Ashmole

PRODUCER ATTITUDES SURVEY

Appendix 1: Figure 13
Survey

For each of the following statements please tick one box to indicate your level of agreement or disagreement.

If possible give your opinion on all the statements even if they are not directly relevant to your situation.

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	DON'T KNOW
MARKETING					
1 Developing the existing 'up-market' image of organic food is a good way forward for marketing.	☐	☐	☐	☐	☐
2 People who eat organic food should become more involved in how it is grown (e.g. buying food direct from the producer; community supported agriculture schemes).	☐	☐	☐	☐	☐
3 Organic food is significantly healthier to eat than conventionally produced food.	☐	☐	☐	☐	☐
4 Consumers should not expect organic vegetables to be blemish-free and regular.	☐	☐	☐	☐	☐
SUPPORT AND STANDARDS					
5 There should be ongoing financial support for organic producers, paid on an acreage basis.	☐	☐	☐	☐	☐
6 There should be conversion grants for new organic producers.	☐	☐	☐	☐	☐
7 Organic standards for arable and vegetable crops should regulate only what is necessary to give consumers a guarantee that the food is produced without using agrochemicals.	☐	☐	☐	☐	☐
8 Organic standards should prohibit the use of genetically engineered plant crops (varieties produced by gene transfer, rather than through traditional methods of selective breeding).	☐	☐	☐	☐	☐
AIMS OF THE ORGANIC MOVEMENT					
9 Organic agriculture should aim to reduce dependence on fossil fuels.	☐	☐	☐	☐	☐
10 Organic agriculture should aim to increase the number of people working on the land.	☐	☐	☐	☐	☐
11 Organic agriculture should aim to encourage the local consumption of locally produced food.	☐	☐	☐	☐	☐
12 Producing food organically is important because it contributes towards a fundamental change of direction not just in agriculture, but in the development of Western society.	☐	☐	☐	☐	☐
ORGANIC PRODUCTION					
13 Organic agricultural methods offer the best long-term hope of feeding the world.	☐	☐	☐	☐	☐
14 Organic agriculture is better for the *local* environment than conventional agriculture.	☐	☐	☐	☐	☐
15 Organic agriculture is better for the *global* environment than conventional agriculture.	☐	☐	☐	☐	☐
16 Organic agriculture allows the farmer or grower a greater degree of involvement and personal satisfaction than conventional agriculture.	☐	☐	☐	☐	☐

With the following questions, please circle the appropriate answer.

17 Have you ever farmed or grown commercially using conventional methods? yes no

18 Would you continue to use organic methods if you knew that you could make more money from conventional production? yes no

19 Were your parents commercial farmers or growers? yes no

20 If your parents were involved in food production (even if only for home consumption) are their methods best described as:
If they did not grow food, please ignore this question.

traditional
organic
modern-conventional

21 Please circle the description which fits you best:

farmer
livestock farmer
farmer and grower
grower
smallholder

22 Is there any other way in which you would like to describe yourself?

23 What is the total acreage of your land – including 'conventional' areas?

24 What was the approximate sale value of your *organic* production for the last year? This should include non-food organic items such as straw, seed, and store cattle or lambs, but not anything bought in for re-sale through a farm shop etc.
Please circle the appropriate range if you are willing to answer this question.

Less than £10,000
£10,000 – £40,000
£40,000 – £100,000
Over £100,000

25 What, for you, are the most important reasons for farming or growing organically?

APPENDIX 2: INTERVIEW SCHEDULE

Appendix 2: Figure 1
Accompanying Letter

5 Sciennes
Edinburgh
EH9 1NH
(031) 667 7422
4 Sept 1991

Dear Mr and Mrs Hodges,

I am currently interviewing organic farmers and growers throughout the UK about their reasons for using organic methods, the difficulties they've encountered, and the direction they would like to see the organic movement take in the future.

The work is part of my PhD research at Edinburgh University, but will also be the basis for a book aimed at the general public - particularly people who already buy organic food and want to know more about how and why it is produced. The book will describe several organic farms and market gardens in detail, and represent the viewpoints of a larger number of producers on issues such as: the advantages of different ways of marketing produce, the extent to which farmers and growers try to 'live organically' as well as producing organic food, the possibility of government support for organic production, and the practicalities of growing to organic standards.

Before I began this research I ran a small wholefood manufacturing business for four years, and it was partly the experience of juggling ethical principles and the need to make a living that got me interested in studying the organic movement in Britain. I was brought up on a semi-organic smallholding, have worked for short periods on various farms and research farms in Britain, and spent three weeks last year in the USSR finding out about Soviet agriculture and allotment-style gardening.

I found your name and address through the Soil Association. I hope that you will be able to help me by contributing your views. The interview usually takes about an hour and a half, although this does depend on how much you want to say! It would be useful to see around the farm as well, if you have the time. If you could do with the help, and were able to put me up, I would also be happy to work for you for a couple of days.

I intend to spend September interviewing people in your area, so I shall telephone you in the next couple of weeks to ask if it would be possible to arrange a visit.

Yours sincerely,

Anna Ashmole

Appendix 2: Figure 2
Interview Schedule

I'm talking to a wide range of people who are doing organic farming and market gardening all over Britain; and some bio-dynamic people as well.

I've been based at Edinburgh University; it's a three year project. I also hope to write a book to help people who are not involved in organic production directly - but who perhaps buy the food - to understand what it is about; not so much the practical details of organics, but more why people are doing it at all. The main thing of course is that people have many different sorts of reason.

I wanted to do this because I was brought up on a more-or-less organic smallholding, so I've got that background. I also ran a business for four years, in food processing, making things for about fifty delicatessens in Edinburgh, and I was very interested by the compromises I found myself making when doing things on that sort of scale.

Some of the questions are a bit philosophical, because I'm interested in why people choose to use organic methods, and how that relates to the rest of their lives. I'd also like to know about how you run this place, and your opinions about the organic movement in general.

[FOR BIO-DYNAMIC PEOPLE: My questions tend to assume that bio-dynamic growers can answer questions about the wider organic movement; about how they feel about organic produce selling in supermarkets for example. Please let me know as we go along if you want to distinguish bio-dynamic from organic in a particular situation.]

The questions usually take about an hour and a half, but if you want to answer them in depth it might take a bit longer - and that's fine by me.

1. *BASIC INFORMATION*

The first questions are just basic ones about the farm/garden, and how you came to be here.

How long have you been at this place?
How big is the farm/garden altogether?
How much of this is organic?
When did you first start to farm/garden organically?
How was it that you first came to be interested in organic methods?
[Was that here or elsewhere?]
Do you belong to any of the organic symbol schemes?
[Have you ever been interested in any of the others?]
Is the place owned, mortgaged, or rented?
What else happens on the farm/garden besides producing food?
Do you rely on the farm/garden for all your income?
[What are your other main sources?]

2. *HISTORY*

Do you come from a farming or country background?
[Where were you brought up then?]
Have you done any other jobs apart from the farming/gardening?
Do you (or your partner) have any qualifications or training in agriculture or horticulture?
Have you ever farmed/gardened conventionally?
What were the main problems you faced when converting/starting up?
How do you learn about organic techniques?
Have you been influenced by bio-dynamic ideas at all?
Have you been influenced by permaculture, or any other particular way of doing things?

3. *THE PLACE*

Could you tell me a bit more about this place - from a financial point of view what are the main crops and stock?
[Which of these are organic and which conventional?]
How do you rotate things around the farm/garden?
Have you done any tree planting, or kept parts of the place as 'wild' or conservation areas ?
What are the main things that you buy into the farm/garden? — I'm thinking of things like fuel, manure, straw, lime, fertilizers or preparations.
Do you make your own compost at all?
Would you generally want to understand the scientific basis of a new technique before trying it out?
Would you be prepared to use a herbicide to get rid of a particular weed problem once and for all?
What machinery and equipment do you use on the place?
[Is this all your own, or do you hire or borrow anything?]
[Is there other equipment which you would like to have?]
How many people work here regularly?
[Full-time or part-time?]
[Do you have seasonal workers or volunteers?]
Are there any particular problems with staffing because of the place being organic?

ORGANIC STOCKHOLDERS ONLY:
Do you rear your own young stock or buy them in from elsewhere?
Have you got any particular animal health problems?
[And what do you do about them?]
Do you use homoeopathic remedies on the animals?
Do you buy in organically produced feed?
[And conventional rations?]

BIO-DYNAMIC PEOPLE ONLY:
What do you make of people using bio-dynamic preparations without understanding anything about the philosophy behind them?

Does the fact that you own/rent the land/have a mortgage make a difference to the way you do things?
What have been your biggest difficulties in running the place, recently?
What do neighbouring farmers make of your ideas?
Do you plan to do anything new here in the future?

4. *MARKETING/DISTRIBUTION/SELLING*

Now we get on to how you sell your produce. . .

How is most of your produce sold?
Do you sell any non-food things like hay, straw, seed, stock for fattening, or animal feeds?
What are your most important crops financially?
Do you sell vegetables for prepacking?
[What are the difficulties and advantages of that?]
Do you sell to OF&G or to Jordons?
[How does that work?]
Would you consider getting involved in a producers' co-op or marketing group?
Do you think that a marketing system for organic produce based on a computer network would be useful?
Do you have a farm shop or any particular local outlets?
[Do you think that people buy vegetables there because they are organic or because they are locally produced?]
How would you like to sell your produce, ideally?
Do you do any on-farm processing or packing?
Do you ever handle other people's produce for them?
Is any of your produce sold as conventional even though it has been produced organically?
What do you feel about the energy costs of transporting foods over long distances?
Do you feel that it is right that organic food should be more expensive than conventionally grown?
Do you think that conventional food is underpriced?
Should people make an effort to buy British organic produce rather than imported?

5. *ORGANICS, GENERAL*

Now, these questions are a bit more general. . .

Do you think that organic agriculture can be financially viable – not just for yourself, but generally?
What do you think are the most common reasons for people to start farming (or gardening) organically?
Would you be in favour of government grants for organic production?
[And of what sort?]
How would you like to see any government money for research and training being used?
Do you think that farming should be viewed differently from other industries?
Do you think, personally, that most of Britain will be farmed organically in fifty years' time?
What sort of people do you think are buying organic food, and for what reasons?
Do you think that it is generally a good thing that supermarkets are selling organic produce?
Do you think that organic agriculture could help to solve problems of world hunger and poverty?
Do you think that Western society is going to have to change in any fundamental ways in the future?
[Why?]
[In what ways? — social, political, spiritual?]

How much contact do you have with other people who are producing or selling organic food?
Have you ever been to a conference or farm walk organised by any of the organic or bio-dynamic groups?
Do you think that organic standards should cover ethical issues, or that there should only be rules to guarantee the quality of the end product?
There is some confusion about the different standards for organic production in Britain — how would you like to see this resolved?
Do you think it makes sense to have farms which are part conventional and part organic?
How do you feel about people converting their land to organic without believing in the principles of it?
What about biotechnology; do you think that organic producers should be allowed to use genetically engineered strains of crops, ones which would be resistant to pests for instance?
The Soil Association standards say that organic producers should "co-exist with, rather than dominate, natural systems" — what do you understand by this?

6. ATTITUDES & ACTIVITIES

Now, going back to how you live, here. . .

Do you feel that you have any particular ideals in the way you live?
Is there a religion or particular set of values that is important to you?
Are there any books which have particularly influenced the way you live?
Has there been any particular experience or incident which made you re-think things?
Do you have any children?
Are you satisfied with the income you get from the farm/garden?
How would you like to see yourself living in twenty years' time?
How would you like to see the farm/garden be carried on?
How do you like to spend your time when you're not working on the farm/garden?
Do you attend any regular local groups or meetings?
Have you ever been involved in any political campaigns or pressure groups?
What magazines or newspapers do you read regularly?
[And farming or organic magazines?]
Are there particular television or radio programs that you try to catch?
How do you feel about running a car?
Have you tried to cut down on how often you use conventional medicines?
Has your diet changed at all over the past few years?
Do you buy organic products for yourself - things that you don't grow?
Do you think it would be a good thing if more people became vegetarian?
What do you feel about hunting and shooting for sport?

Do you feel that you think about the land and the way you live here very differently from surrounding farmers?

It is sometimes suggested that the Christian tradition in the West encourages exploitation of the natural world. Do you think that this is so?

Imagine if, by some catastrophe, the entire human race was to die off. Does it make a difference to you in thinking about that, whether the natural world is left pretty much as it is, or whether it is also devastated?

Last one — what would your ideal vision of the future be like?

Appendix 3:
Table of Working-Visits

Appendix 3: Figure 1 *Table of Working-Visits.*

	AREA (in acres)	TYPE OF HOLDING	AGRICULTURAL EXPERIENCE	LABOUR OTHER THAN SELF & FAMILY	SALE OF ORG. PRODUCE	REGION
1	3a organic	market garden	outsider	part-time paid volunteers	farm shop; deliveries	Fife
2	20a organic; 107a conventional	small mixed farm	conventional farming experience	farm contractors; partnership with friend	seasonal shop; wholesalers	Tayside
3	180a organic	mixed farm & market garden	second generation organic producers	long-term volunteers	farm shop; wholesalers	Dorset
4	40a 'organic' (not registered)	small mixed farm	outsider	none	livestock market	Durham
5	479a organic; 421a in conversion	large mixed farm	land previously farmed conventionally by family	paid staff	grain merchants	Oxfordshire
6	3a bio-dynamic	bio-dynamic market garden	outsider	long-term volunteers on ET schemes etc.	deliveries	Lothian
7	1,100a organic	large mixed farm	land previously farmed conventionally by family	paid staff	grain merchants; org meat dealers	Borders
8	4a organic	market garden; permaculture	conventional farming experience	volunteers	farm shop; deliveries	Hampshire
9	147a organic; 46a in conversion	mixed farm with field vegetables	conventional farming experience	agricultural student; casual labour	wholesalers; grain merchants	Yorkshire
10	30a organic	small farm and garden; community-run	outsiders	members and volunteers	home consumption	Hereford

GLOSSARY

Aberystwyth: Centre for Organic Husbandry and Agroecology.

Acres and hectares: there are 2.47 acres in a hectare; I have referred to acres throughout, as this is the measurement almost universally used by organic producers; the abbreviation is 'a'.

ADAS: Agricultural Development and Advisory Service.

Agriculture: technically, this encompasses not only arable farming and livestock farming but also horticulture and fruit growing; it is colloquially often restricted to the various sorts of farming.

Agrochemicals: in the context of this work agrochemicals are those fertilizers and pesticides not permitted under organic standards.

Allium: generic term for members of the onion family.

Anthroposophy: system of thought inspired by Rudolf Steiner; anthroposophical agriculture is known as 'bio-dynamic'.

BDAA: Bio-Dynamic Agricultural Association.

Bio-dynamic: system of agriculture following the anthroposophical teachings of Rudolf Steiner. See section on *Bio-dynamics* in Chapter 6.

Biological: a synonym for organic; the root is much used in other languages, eg. 'biologique' and 'biologischer'.

BOF: British Organic Farmers, now merged with the Organic Growers Association and jointly referred to as BOF/OGA.

Brassica: generic term for members of the cabbage family.

Bristol organisations: a shorthand, for the purposes of this work, referring jointly to the Soil Association, British Organic Farmers and the Organic Growers Association. Used in circumstances where their separate identities are irrelevant; they all work closely with each other and share offices in Bristol.

Broad spectrum herbicides: herbicides which kill a wide range plants rather than being designed to deal with particular types.

Brush hoe: machine towed behind a tractor with rotating brushes which take weeds out from between rows of crops – which are themselves protected by adjustable shields. Requires a good deal of co-operation between the tractor driver and the operator who sits on the hoe to keep it in line with the crop rows!

BSE: bovine spongiform encephalopathy – 'mad cow disease'.

BST: bovine somatotropin, naturally occurring hormone also (notoriously) produced by genetic engineering to increase the milk yield of cows.

Bucket rearing: feeding calves with milk replacer from buckets, usually with teats attached, rather than allowing them to suckle the cow.

Chitted: sprouted.

Cloche: sheets of glass held in pairs by a wire frame and placed over crops to act as a mini greenhouse during the early stages of growth.

Companion planting: mixed planting of two crops which are thought to be mutually beneficial, for instance carrots and onions (onions deter carrot fly) or, for similar reasons, intermixing crops with non-productive plants such as marigolds.

Conformation (of carcasses): the shape of an animal carcass, and proportion of lean meat to fat.

Conventional agriculture: I have followed the organic movement in using this term to refer to modern, non-organic agriculture; old-fashioned traditional, farming falls between the two categories and an exception is made for it where relevant. Similar, but more emotive terms include 'industrial agriculture', 'chemical agriculture' and, more confusingly, 'intensive agriculture'.

Conventional farmers/producers: a term widely used within the organic movement to designate non-organic farmers or producers.

Derelict: land previously cultivated but now (visibly) neglected.

Diversification: changing to another way of working or taking on additional enterprises – recently, British farmers have been encouraged to diversify rather than rely on income from the sale of crops and stock.

Elm Farm: Elm Farm Research Centre, a charitable trust devoted to the research and development of organic agriculture.

ESRC: the Economic and Social Research Council (who granted me a post-graduate studentship and thus made this work possible).

Fallow: temporarily un-used arable land (note that this does not include grazed land or, technically, land sown to green manure crops).

Farmer: someone cultivating large areas of land (unlike a market gardener). Farms may be all-arable or all-livestock, although most organic farms are mixed. Farmers may also grow vegetables as a field crops and thus additionally come under the category of 'grower'.

Fertilizers: includes both 'artificial' or 'chemical' fertilizers and those products approved for organic use such as farmyard manure and seaweed extracts.

Forage crops: crops grown for consumption by livestock, sometimes grazed rather than harvested and stored.

FWAG: Farming and Wildlife Advisory Group.

Green manure: crops (eg mustard or lucerne) which are cut and allowed to decompose on the field where they have grown in order to build up the humus content of the soil.

Grower: producer of fruit and vegetable crops. Many organic growers have only a limited area of land (eg market gardens or orchards) but others grow fruit and vegetables as part of a farm enterprise.

HDRA: Henry Doubleday Research Association. A charity dedicated to researching and promoting organic methods, particularly on a home-garden scale. Runs 'Ryton' – the National Centre for Organic Gardening.

Heavy metals: includes copper, lead and zinc; commonly a cause of environmental pollution.

Holding: a term referring unspecifically to a farm, market garden or smallholding.

Horticulture: the growing of fruit, vegetables or indeed flowers; a term not much used in organic circles.

Hungry gap: the period during the late spring when few fruit and vegetable crops can be harvested.

Husbandry: a term covering both farming and growing; sometimes modified to refer specifically to animals, eg 'livestock husbandry'.

IFOAM: International Federation of Organic Agriculture Movements.

Ley: land sown with grass or grass mixed with clover and/or herbs; usually temporary (from one to six or more years) as part of an arable rotation.

MAFF: Ministry of Agriculture, Fisheries and Food.

Mangold: (or mangel) a fodder beet.

Marinure: a proprietary (organic-approved) seaweed-based fertilizer.

Market gardener: a grower cultivating a restricted area of land who is therefore not involved in arable, or significant livestock, production.

Modules: vegetable seedlings raised in separate blocks of peat or compost so that they can be planted out without disturbing the roots.

Mulch: material used to cover the top of the soil, frequently to restrict evaporation, suppress weeds, or prevent erosion. Materials are often biodegradable (eg straw, newspaper), but plastic sheets are also used and removed when no longer required.

Multiples: supermarket chains.

Naturopathy: an alternative therapy concentrating on diet, also known as naturecure.

Nozode: specific form of homoeopathic preparation.

NPK: abbreviation for (chemical) fertilizers containing primarily nitrogen, phosphorus and potassium.
OF&G: Organic Farmers & Growers.
OFC: the Organic Farming Centre, a three-year project run by the Edinburgh School of Agriculture and the Edinburgh University Centre for Human Ecology.
OFF: Organic Farm Foods; a major organic vegetable wholesaler.
OGA: see BOF
Pack-house: warehouse with equipment for grading, washing and packing vegetable produce.
Permaculture: a design system for permanent agriculture; see section on permaculture in Chapter 6.
Pesticide: a term including herbicides, insecticides and fungicides, of which only a few naturally derived insecticides are approved for organic use.
Preparations: numbered 501, 502 etc; used in bio-dynamic agriculture as a sort of homoeopathy for plants.
Probiotic: treatment given to stock to encourage the establishment of beneficial gut bacteria; permitted but not recommended under Soil Association standards.
Producer: a collective term encompassing both farmers and growers. Similarly, 'producing' is used to cover growing field crops, growing vegetables, rearing livestock, dairying etc.
RESSG: Rural Economy and Society Study Group.
SAFE: Sustainable Agriculture, Food and Environment; an alliance of relevant organisations and pressure-groups.
SAOMCo: Soil Association Organic Marketing Company; administers the symbol scheme.
Scruffler, scruffling: 'hoeing' a field crop such and swedes with a tractor. The scruffling machine is towed behind the tractor and someone sits on it to guide the multiple blades between the rows of crops. Precursor of the brush hoe.
Set-aside: previously arable land lying fallow in order to qualify for subsidies.
SFS: Sustainable Farming Systems; a University of Edinburgh/Scottish Agricultural College project which developed out of the OFC.
Smallholding: small acreage of land with diverse enterprises; primarily feeding those who live and work on it but often also selling surpluses.
SOPA: Scottish Organic Producers' Association.
Stores: lambs or cattle bred on one farm and sold to another for fattening.
Suckler (cattle or herd): system of rearing beef calves by allowing them to suckle from cows; single-suckler herds have one calf per cow, multi-sucklers generally have two.
Symbol: an organic symbol, eg the Soil Association's or OF&G's; implies that the holder is registered as an organic producer.
Tilth: condition of the soil surface; a fine tilth is required for planting seeds.
Tramlines: in conventional crops, when it is necessary to take machinery repeatedly through growing cereals; the same tracks are followed each time and show up as lines in the crop.
UKROFS: United Kingdom Register of Organic Food Standards.
Undersowing: putting in grass or clover seeds at the same time as a cereal; the cereal grows faster, but once it is harvested the other plants will grow on. This technique means that the land does not have to be ploughed a second time.
Veganic: vegan-organic, ie organic production avoiding any animal inputs (such as manure).
Vetch: leguminous plant often sown for silage or green manure
Volunteer (beans etc): seeds germinated from previous crop in a field.
WWOOF: Working Weekends On Organic Farms.

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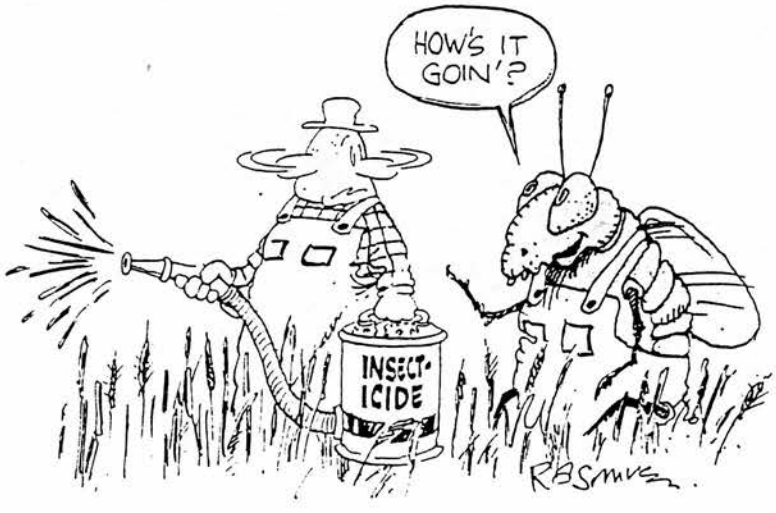
HOW'S IT GOIN'?
INSECT-ICIDE
R.B. Smith